

THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

FRANK: G. RUFFIN, EDITOR.

P. D. BERNARD, PROPRIETOR.

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SCIENTIFIC AGRICULTURE.

BY PROFESSOR GILHAM.

NUMBER IV.

(Continued from page 6, Vol. XIII.)

OF SOILS.

Having shown in previous numbers that the organic elements of plants are carbon, oxygen, hydrogen and nitrogen; that carbonic acid, water and ammonia are the principal sources of supply of these substances to plants; that the inorganic bodies found in plants are potassa, soda, lime, magnesia, oxyde of iron, oxyde of manganese, silica, chlorine, sulphuric and phosphoric acids; that although the quantities of these bodies required by vegetation are comparatively small, they still are as necessary as the more abundant organic bodies; and that the soil is the only source of supply of the inorganic food of plants; it remains for us to consider the *origin, composition and properties* of soils.

GENERAL ORIGIN OF SOILS.

Soils have their origin in the disintegration, or wearing down of the rocks which compose the crust of the earth. In mountainous and very hilly countries the rocks are protruded above the surface of the soil, and in many places scarce any thing is to be seen except the naked rocks, while in more level regions they are found embedded far below the earth's surface. Wherever found, however, they are more or less exposed to atmospheric influences. These influences appear at first sight to have but little effect, as numberless instances are within the experience of almost every one, in which rocks have been exposed for many years, or even centuries, without undergoing any apparent change; but if we consider for a moment that soils have been forming for thousands of years, we can readily understand that if the atmosphere has any influence upon the rocks, a portion, at least, must eventually be reduced to that fine state of division known as soil.

The action of atmospheric agents in the disintegration of rocks and formation of soils

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is both chemical and mechanical. The carbonic acid of the air, although so small in quantity, exerts a powerful influence; first, by its slowly attacking certain minerals and rocks, by which existing combinations are destroyed, and new ones produced, whereby the rocks are either reduced to some form of soil, or left in such a state as to yield without difficulty to the other agencies which are constantly in operation in the air for the same purpose; and secondly, by its property of being absorbed by water, a property which, it will be remembered, adds materially to the solvent power of that fluid.

The oxygen of the air, too, attacks certain rocks, particularly those which contain the *protoxyde of iron* and the *sulphuret of iron*. In the first case the protoxyde passes to the state of *peroxyde* of iron, (iron rust,) by the absorption of oxygen, and in the second case the sulphur and iron both become oxydised, the sulphur passes to the state of sulphuric acid, the iron to protoxyde of iron, and these uniting with each other form sulphate of iron (copperas.)

Water acts by its solvent powers upon those constituents of the rocks which are in the smallest degree soluble in that fluid, and in this, as was stated above, it is greatly assisted by the carbonic acid which it holds in solution. Again, water, by entering the pores of the rocks, softens them, and makes them yield much more readily than they would otherwise do; and when frozen, by the great power exerted in its expansion, it destroys their cohesion entirely, so that when the ice melts, the rock falls to pieces, and sometimes to fine powder. Water also acts by its transporting power, carrying the finer particles to great distances sometimes, and by the force of attrition, causing the gradual wearing away of the larger ones. In mountainous regions all the finer parts of the soil as it is formed are removed from the tops and sides of the mountains, and carried into the valleys below. In cases where streams which have their rise in such regions, overflow their banks in time of freshets, the solid matter held in suspension is deposited over large areas in the form of mud, forming the soils of river bottoms, or what are called "bottom lands."

The rocks which compose the earth's crust contain very little organic matter, and many of them none at all, hence when soils are first formed they necessarily contain but a small proportion of it. Nature, as we have seen in

a former number, has so constituted plants that they derive most of their organic food from the air, while some depend upon that source alone for their supply. Now, in the first formation of a soil those plants only which are capable of living at the expense of the air will take root. The growth is at first very limited; the first plants die, and falling to the earth, mingle with the soil; decay sets in, but before it is completed another growth is matured, dies and rots. Thus a small quantity of organic matter is taken from the air and added to the soil; this process continues, each generation of plants making a small addition to the organic matter already collected, until, finally, the soil assumes a rich dark color, and will support a luxuriant vegetation.

Plants have another very important influence in preparing the soil for successful cultivation. Their roots, particularly the roots of trees, penetrate sometimes to the distance of many feet below the surface; by so doing, they are more firmly fixed in the ground, are more free from drought, and they meet with supplies of inorganic matter which they could not obtain in sufficient quantity from the surface soil. The sap, holding inorganic matter in solution, rises to the leaves, where it is spread out to the action of the atmosphere, by which it is evaporated, and more or less of its inorganic matter deposited. This process continues until the pores of the leaves becoming choked up, as it were, the leaves cease to perform their proper functions, change color, die and finally fall to the ground. These in their decay leave large quantities of organic matter, which becomes incorporated with the soil, while all the inorganic matter which they contained, and which, as we have stated, was drawn from various depths below the surface, now becomes part of the surface soil, and, having once been in the circulation of plants, the substances which compose it, are better fitted for the wants of succeeding races. It is by this annual *top-dressing* of leaves that the soil is brought, in many instances, to the condition of great fertility; and so beneficial is it that the very lightest soils will, for a few years after the removal of the natural growth, produce abundant crops.

COMPOSITION OF SOILS.

From what has been said in relation to the origin of soils it is manifest that they must differ very materially, both mechanically and chemically, and that a knowledge of the *geology* of a district of country is essential to a true appreciation of the qualities of its soils. Before speaking, however, of differences resulting from differences in the rocks, we will devote a short time to the consideration of the various substances to be found in soils.

From the statements made in our last number it follows that every soil which is fertile without the aid of manure of any kind, must contain *all the substances to be found in the ashes of cultivated plants*, and in quantities sufficient

to yield constant supplies to growing crops. These substances have already been enumerated; all truly fertile soils are found to contain them all, together with *alumina*, and more or less *organic matter*. This organic matter having been derived from the successive races of vegetables that have grown upon the soils, it follows that it must be composed of the same elements that are found in the plants themselves, namely: carbon, oxygen, hydrogen and nitrogen. Carbon is the predominating element, and it is to this that the dark color of soils, rich in organic matter, is due. The proportion of nitrogen is always small, but the presence of some little is important, as it is to this that we must look for sufficient supplies of ammonia. But though organic matter is necessary to fertility, there does not seem to be any fixed proportion required, as fertile soils have been found to contain from two to fifty per cent. of it; and most soils that are permanently fertile contain from five to ten per cent.

The presence of organic matter in the soil is of importance in various ways: First, it ministers directly to the growth of vegetation by supplying plants with food through their roots. Under the influence of air and moisture the organic matter of the soil is gradually decomposed, and the new products, carbonic acid, water and ammonia, are formed. Abundant supplies of water are obtained by vegetables from the atmosphere, and much the largest portion of the necessary carbonic acid is derived from the same source; still all plants seem to flourish better when they can absorb more or less carbonic acid through their roots. It is now an admitted fact that some ammonia is brought down by rains from the atmosphere, and that in soils capable of retaining it this ammonia ministers to the growth of vegetation; but far the greater part must come from the soil itself, and hence the importance of plentiful supplies of organic matter rich in nitrogen. Secondly, the presence of organic matter in the soil materially affects its mechanical condition. It lightens stiff clay soils, puts them in a condition to be more readily worked, and renders them more permeable to air, by which those changes which are so necessary to fertility may go on with more ease and certainty. In light sandy soils its effects are equally beneficial; they retain moisture better, and what is of equal consequence, they retain manure longer. Thirdly, the dark color which organic matter communicates to soils, gives them the property of absorbing heat better; a property which renders the germination of seed more certain, and makes the crops earlier.

From what has been said it follows that, in a soil which is under constant cultivation, the organic matter must be gradually dissipated; that such is the case, no farmer who does not use much stable manure, or turn in green crops, will deny; but it is found that the exhaustion goes on more rapidly than would be required to supply food to the crops. The mere stirring

of the soil, by which the air gains free access to all its parts, will cause its gradual removal; and this, taken in connection with that constantly consumed by growing crops, renders the final exhaustion of the organic matter of the soil inevitable, unless returns, in the way of organic manure of some sort, be made.

Before returning to the discussion of the various substances which compose the inorganic part of the soil, it will be well to say a few words in relation to the rocks from which soils are derived. Rocks are of two kinds, stratified and unstratified. The stratified were once deposits of clay and mud in the bottoms of oceans, lakes, ponds, estuaries, &c. which have hardened and been thrown above the surface of the waters by volcanic forces; the unstratified were once in a state of fusion by the internal heat of the earth; some of them were thrown out while in a melted state, and left to cool upon the surface, while others, solidified under the vast pressure of the ocean, and of other rocks, and were afterwards thrown up by the same volcanic agencies. Now it is found that the rocks which compose the earth's crust are, taken as a whole, whether stratified or unstratified, made up, for the most part, of a very few simple mineral substances. These substances are silica, alumina, lime, oxyde of iron, and occasionally potassa, soda, and one or two others.

Except in limestones, a particular class of stratified rocks, silica is in large excess over all the others, and as most of the carbonate of lime is removed from limestones before soil can be formed from them, leaving even here an excess of silica, it follows that silica must be the leading constituent of all soils; and some, such as very poor sandy soils, are almost entirely silicious. Alumina is, in most cases, the next most abundant body in soils; it is the base of all clays, clays being true chemical salts, *silicates of alumina*. It is a very common mistake to suppose that very stiff clay soils are almost entirely made up of alumina, and are destitute of silicious matter; all clay soils that are workable, contain more or less uncombined silica (sand) which may be separated from the clay by careful washing; but the clay itself being a salt of silica, is composed, in its pure state, of about 60 parts of silica and 40 of alumina to the 100.

It will be remembered that alumina is not found in the ash of plants, and hence it is not required by them as food; at the same time a due proportion of this substance is of great importance to the soil. It has been long known that clay soils retain manures well, especially those which are rich in ammonia, but it is only within the last year that a satisfactory explanation of this important property has been given. Professor Way, Chemist to the Royal Agricultural Society of England, has, by a long series of experiments, discovered that in soils which have this power of absorbing and retaining ammonia, there always exist what are known to chemists as *double salts*; that these

double salts are the *silicates of alumina and potassa, or soda*; and that when ammonia is presented to a soil which contains either of these double salts, the potassa or soda is *replaced by the ammonia*, and the compound becomes double silicate of *alumina and ammonia*. This compound is not volatile, and is very slightly soluble, properties which render its existence in the soil of the utmost importance. The mechanical condition of a soil depends upon the proportion existing between the clay and uncombined silica, or loose sand. Very light sandy soils retain moisture badly, and hence are more liable to suffer from drought than stiffer soils. Again, from their light nature, and from their having but little clay present, their power of retaining manures is very limited, consequently they are difficult to keep in good condition. They possess the advantages of being easily worked; of admitting free access of air to the roots of plants; of permitting the roots to penetrate with ease; and of being "quicker" than clay soils. Very stiff clay soils, on the contrary, are very difficult to work; do not admit air freely; offer resistance to the downward progress of the roots of plants; are very retentive of water, by which they are too wet in ordinary seasons, and in time of drought they dry very hard, crack open, and destroy the roots of plants; besides, the evaporation of so much moisture from the surface, instead of sinking, makes such soils very cold, and consequently crops grown in them must be late. If, however, a soil is composed of a proper admixture of clay and sand, the defects of both light and stiff soils are avoided, and we have all the mechanical conditions of a fertile soil fulfilled. Most writers classify soils with reference to the proportions of clay and sand they contain, but there appears to be but little practical benefit resulting from such a classification. When mechanical defects exist in a soil, resulting from the admixture of clay and sand, the knowledge of the relative proportions of clay and sand will do the farmer no good, since it is out of his power to alter them in any appreciable degree; it will be of much more service to him to know how he can, by skilful cultivation, overcome natural defects.

The next most abundant substances found in soils are oxyde of iron and lime. Most agricultural writers place lime before the oxyde of iron, and no doubt in many instances lime predominates, but so far as our observation goes, the oxyde of iron is far the most abundant of the two in the soils of this country. The oxyde of iron is very similar to ammonia in its chemical relations, and it has been asserted that it plays a part in retaining manures akin to that performed by alumina, but this is by no means well established. It has an important influence upon the color of the soil, the yellow and red colors of clays being always due to its presence; and it is a necessary constituent of the ash of plants. Lime exists in the soil in combination with carbonic, silicic,

(silica), sulphuric and phosphoric acids, or as carbonate, silicate, sulphate and phosphate of lime—the two last mentioned being always in small quantity. The soils of Virginia have not been thoroughly studied, but so far as we can learn, the prevailing salt is the silicate; and this is true, even in the valley, where the soils rest upon, and have been formed from, limestone. There are large tracts of land in the State that are almost destitute of this very important constituent—of this, more in time.

Whenever a soil is formed from rocks containing much of the mineral *talc*, the proportion of magnesia is large, and the soil is generally cold and sterile; but in most soils the proportion of magnesia is small, and instead of being hurtful, is actually necessary to vegetation.

The remaining constituents are in small quantity even in the most productive soils, and what is a little remarkable, among these substances we must look for those which are in greatest demand by growing vegetation; most of them are removed in larger quantities than the more abundant substances, and when the soil is exhausted by cultivation, lime, or some one or more of these bodies are found to have disappeared. The occurrence of some of the most important constituents of the soil in such small quantities, and their consequent liability to exhaustion, seems to be designed by an all-wise Providence to lead man, while he is exerting his physical powers in the mechanical operations of agriculture, to apply his intellect to the study of the soil, that while he is preparing food and clothing for the body, the mind may also be richly clothed and fed. Potassa and soda are of importance in the formation of the double salts spoken of under the head of alumina, by which the ammonia in the soil, and that brought down by rains, is made, as it were, one of the fixed principles of the soil. These alkalis also supply plants with all their silica. Silica, it is well known, is very insoluble, and so are all of its salts except silicates of potassa and soda. The silicates of these bases are some of them very soluble, and it is to their existence in the soil, that the absorption of silica by the roots of plants is due. Besides supplying vegetation with a part of its ammonia, and with all of its silica, potassa and soda are of themselves necessary parts of the inorganic food of plants; in this respect potassa is of far more consequence than soda. Phosphoric and sulphuric acids are always in very minute proportions in the soil; the phosphoric acid is always in combination with some base, such as lime; and such is generally the case with sulphuric acid; but some soils which are unproductive from the presence of sulphuret of iron, contain it in an uncombined or free state. Both these acids are necessary to the soil; of the two, phosphoric acid is far the most largely consumed, and is much the most difficult to replace. Chlorine, while found in the ash of plants, is in very minute proportions, and does

not seem to be of much importance to most plants, as there appear to be few soils which are not capable of supplying this element in sufficient quantity for the most luxuriant crops, provided the other necessary substances are present in quantities sufficiently large.

Thus far we have spoken of the composition of the soil, supposing it fertile; that is, capable of producing abundant crops of the various cultivated plants without any aid from manure. Let us look for a moment to those which are more or less unproductive, or barren. Sometimes a soil may contain *all* of the substances enumerated above, and still be unproductive—a condition which may result from two causes: There may be some noxious substance present, such as protoxyde of iron, or free sulphuric acid; or the mechanical condition of the soil may be a bar to fertility. But by far the most frequent cause of the barrenness of soils is the absence of one or more of these substances which every fertile soil is found to contain. In soils that are productive by the aid of ordinary dressings of stable or other manure, it generally happens that some one or two bodies are in too small quantity in the soil, or are entirely absent; but when the soil is very unproductive it always results from the absence of several of the necessary constituents.

Below we insert a table taken from Norton's Elements, which forcibly illustrates the position we have assumed.

TABLE.

In one hundred pounds.	Soil fertile without manure.	Soil fertile with manure.	Very barren.
Organic matter -	9.7	5.0	4.0
Silica - - - -	64.8	83.3	77.8
Alumina - - -	5.7	5.1	9.1
Oxyde of iron -	6.1	3.0	8.0
Lime - - - -	6.9	1.8	.4
Magnesia - - -	.9	.8	.1
Oxyde manganese	.1	.3	.1
Potassa - - -	.2	-	-
Soda - - - -	.4	-	-
Chlorine - - -	.2	-	-
Sulphuric acid -	.2	.1	-
Phosphoric acid	.4	.2	-
Carbonic acid -	4.0	.4	-
Loss - - - -	1.4	-	.4
	100	100	100

It will be observed that the barren soil is not wanting in silica, alumina, or oxyde of iron, but that those substances which in the fertile soil exist in least quantity, are in the barren one entirely absent.

Thus far we have said nothing in relation to the differences in soils resulting from differences in the geological features of the country, or of the mechanical conditions necessary to productiveness; in our next we will consider these.

For the Southern Planter.

FRENCH MERINO SHEEP.

Mr. Editor,—In your December number, 1852, page 380, you recommend strongly a combined expenditure for the above breed of sheep. Your object, of course, is to obtain for the good Old Dominion the most profitable to the farmer. I have given ample proof of the sincerity of my belief, that the improved Cotswold is more profitable than all others to the farmer, by importing, at very heavy rates, the best of England; they having won the highest prizes of the Royal Agricultural Society in many contests. I have not been disappointed in my expectations, even in the sales of *part bred yearling muttons*; and if I can come across a breed of sheep calculated to be *more* profitable, I pledge myself that my improved Cotswolds go overboard for that breed at once; I will not sacrifice my interest to any other feeling in this matter.

Many look to you for information, and if led to the purchase at heavy cost of animals that profit not, your usefulness will be impaired: be careful then for the sake of your patrons, how you urge any expenditure without due comparison and consideration; let us sift their pretensions to that character—in doing so, I shall only calculate their profit for general farming purposes; their sales as breeders not being a fair criterion. I presume you will agree with me that in a grain growing farming country, the prime, indeed almost the only profit in sheep raising, is the mutton; and that breed is the most profitable which will enable the farmer to turn around his capital with profit, at the least expense of any kind. Farming and *wool growing* cannot be so united as to make *both* profitable: it would require too many sheep to make wool growing the object of profit, if profit is also expected from growing grain, tobacco, or cotton. Farming and sheep grazing can be very profitably united when the breed is judiciously selected, one being auxiliary to the other. These two branches of husbandry can be more profitably united than any other, because the fleece (to which alone wool growers look for their profit) ought to pay amply for the keep, the carcass to be clear profit—these advantages no other animal render. Do the French Merino accomplish this? You say, the owners of the French Merino keep the ewes until three years old, the buck four, before they are permitted to copulate, and say it approvingly; most probable that is desirable, if not *necessary to that breed of sheep*—but where is the *profit* then?

Here I might stop: for what prudent farmer would wish a breed of sheep, whose breath was in their nostrils, to remain without propagating their species three and four years? and what would that be in comparison with the improved Cotswold? A ewe of the improved Cotswold breed in the three years at the *lowest* calculation, with a single lamb each year, will

have given in that time, in muttons alone, and independent of three additional fleeces, \$24; and it might be (twins each year) \$48; which would give six additional heavy fleeces: twins are more usual than uncommon with this breed, they have been known many times to have three at a birth; and raised them, too, for they are great nurses.

In the above calculation \$8 is fixed on, because in this country no, *even part bred, yearling* mutton of this breed sold to the butcher this fall under \$8 each. There is but little yolk in the Cotswold fleeces, and when washed, the wool is generally *clean*, and with but slight loss from yolk, and it is not uncommon for their first fleeces to give 10 lbs. washed wool; service and breeding checks its growth after. How will the French Merino ever catch up with this start? But, sir, throw away this three years' *advanced* supply, for the sake of comparing their *after* value. The French Merino can only sell his mutton once in three or four years, i. e. that mutton must have that age before he comes to market. In that time, the improved Cotswold can sell three or four, or according to twins, six or eight; each one (I will engage at a *higher* price than the three or four year old) of the French Merino, and I think you will find, doubly as much, both being put on the same treatment. This statement, you will see, is made solely in reference to *mutton*, and the multiplicity of the fleeces in favor of the improved Cotswold is not at all considered. Do you think I have priced them too high? Why, sir, I have used the *lowest* given by butchers for *even part bred* YEARLINGS. Butchers, last summer, offered \$5 for some *sucking* lambs, and I sold last November to them, the wether lambs that were lambed the preceding spring, and *not thorough-bred*, for a fraction over \$8 10 each. All the sales were made *on* the farm; the *farmer* not bound to drive them one foot—the butchers were here, saw and handled them before purchasing, and no man knows the value of a mutton better than an experienced mutton butcher. Now, I question much if this sale of *lambs* is not *higher* than can be made to the butcher of the French Merino mutton at *four years old*. As to the Cotswold, this is no *theory*: there is the *proof*—it is not the occurrence of this one year only; it has been so for years.

As to the French Merino, I take the authority relied upon by yourself, our distinguished minister, Mr. Rives, and Mr. Gilbert; one of them owning the sheep, deeply interested, and not at all disposed to disparage them—Mr. R. in effect says, and truly, “owing to their extraordinary oily secretions, as given in the dirt and grease, it is reduced one-half by process of washing even on the sheep's back—two-thirds after undergoing the further washing for manufacturers uses.” I do not think he means two-thirds are to be deducted after the one-half is taken out; that would make the fleece ridiculously insignificant. Mr. G. says, “by means of the *good care* given to them, and

the *judicious selections* of rams, (the Italicising mine) to unite with the *best ewes*, there was obtained from them *some rams* which at *three years old* weighed 90 kilos. (by your calculation something under 200 lbs. live weight of course) and gave 8 kilos. of wool, (about 16 lbs.) ewes which brought 60 kilos. (about 132 lbs. live weight of course) and gave 6 kilos. of wool, (about 13 lbs.) Scale them to suit the manufacturer, and you have (two-thirds off) 5 lbs. and a fraction to the ram, and 4 lbs. to the ewe, and this after "*good care and judicious selections of best ewes and rams,*" and "*not permitted to propagate until 3 or 4 years old,*" (according to size.) Give the same advantages to Mr. Dox's Merinos, and how far will they be behind them? The *yearling, improved Cotswold, without that extra treatment*, would beat them greatly in the amount of money to the fleece. (Mr. Campbell's sales of wool were in the north—from which must be deducted transportation and commissions to get ours there.) But as to mutton, do you consider "*with judicious selection of best rams and ewes, and good care for 4 years, 200 lbs. live is great weight for a 4 year old ram; 132 lbs. for a live ewe, 3 years old, neither permitted to propagate before?*" But reduce it to mutton, the ram, when his head, with his monstrous horns, is off, will most probably draw under 100 lbs.—the ewe about 65 or 70 lbs.; requiring all this to "OBTAIN" it, and only some have reached it at that. Why, sir, we should think not much of even a *part bred yearling*, of the improved Cotswold, that under such treatment would not far excel the ram, gross, and much farther net—the ewe not worthy consideration in our estimation. I will say to you that when you visit this section of country—and your *duty requires you to do so*—to see how far we profit by your valuable paper, if I do not prove this position to your satisfaction, you being the *judge*, I will put before you and your friends to discuss, a saddle of mutton of the improved Cotswold (*yearling*) not grain fed—that you may draw comparison of with your favorite Southdown—and will, where a difficulty may occur, give you "sum-'at" to wash it down. Indeed I may with perfect safety, I believe, say, our muttons on our *ordinary treatment on grass alone* have brought 110 to 130 lbs. net fall, after one year old.

But Mr. Gilbert further says, by continuing that *extra treatment*, he has *raised rams* weighing at three years old 125 kilos., 275 lbs. live weight, (near 140 net) and 12 kilos. of wool, (about 26 lbs.—Mr. Campbell, in your Jan'y No., 1853, claims no such weights) and ewes 100 kilos. (220 lbs., about 110 or 120 net,) and 9 kilos. of wool, (about 20 lbs.)—scale it: for the buck, less than 9 lbs.; the ewe, less than 7 lbs. This gives them *every advantage*—is calculated as the growth of each year, and it may be, three and four years growth—this was, by his *own statement*, the *brag, topmost round* of the ladder, with *extra treatment and care*—not even permitted to propagate in that time. How will they compare with the improved Cots-

wold, as near to that treatment as we know of—an improved Cotswold mutton has been brought to 300 lbs. net—much heavier than the *best French Merino* gross live weight, and *much heavier than double* as much net; at the same rate of good care, the *yearling* improved Cotswold can beat the *very best French Merino* at any age. An improved Cotswold ram, well raised the first year, never pushed after, and each year attended to from 50 to 75 ewes, weighed 420 lbs. alive, bordering on double as much as the best French Merino; and gave 18½ lbs. of wool one year, 18½ lbs. the next—37½ lbs. in two years of washed wool—more than *double* as much each year. But the ordinary run of the *best French Merino* flock even at *full age*, are a long way behind the *yearling* improved Cotswolds on our ordinary keep: the more generous the keep, the farther will the Cotswolds beat them.

Messrs. Gilbert and Cugnot were the owners of these sheep, greatly interested in making them important in the U. States, and were giving information to the American Minister; of course they kept their best; did they weigh one to prove the weight to Mr. Rives? Did they show him one likely to produce such a fleece? I presume not. We know nothing of those gentlemen, whether they are to be relied on, or of the sanguine temperament that doubles every thing in their estimation. Why is it, the English (who are near neighbors, and not inconsiderable manufacturers) have not procured this breed of sheep? Because they know they are not so profitable for an *agricultural* country. Some object, that manufacturers do not like Cotswold wool to manufacture as being too long. Throw the wool overboard and you will still find the Cotswold the most profitable to the farmer. But do not the French Merino claim to be long wool too? Can such weights exist without length of fibre? and is it easier to manufacture Merino character of long wool, than the Cotswold (mouselin de lain) character? I presume not, and although factories may complain, I do not hear of their giving any more per pound for any other kind.

I had the pleasure of seeing some of these sheep in the fall of 1851 at the Baltimore fair; one (I was informed) held at \$2000, and I doubted greatly the *possibility* of there being surface enough to bring the weight of fleece each year, or carcass claimed for them; the keeper, I understood, admitted two and a half years' growth of wool. A gentleman of age and experience, and well informed on sheep, said, if what he heard was true, and his informant was to be relied upon, and acquainted with these sheep and their management, that he would not be surprised at any weight of fleece they brought them to in the dirt. The fleece was permitted to grow some years, and occasionally sweet oil poured and Scotch snuff dusted in it, to create artificial yolk—(probably this is what Mr. Campbell, in your Jan'y No., 1853, p. 11, alludes to in his remark, "*by some sleight of hand*"). I do not vouch for this,

as I received it I give it to you: admit it untrue, and it does not alter at all my position.

I have a letter from a gentleman claiming to have both the common and French Merino, who says, with the same treatment, fairly tried, there is but little, if any, difference between them. I had the pleasure of receiving a visit from the President of the Agricultural Society of one of the counties of Ohio, who mentioned that some gentleman in his county, bought a ram of that breed for \$1000: with the *first* fleece they were *not* dissatisfied; the next induced them to consider him but little, if any, better than the common merino.

Do you not consider it best to pause, ponder well, and fully investigate, before you advise such an expenditure in Virginia. I have fully *tried* the improved Cotswold's, and honestly believe them, to the farmer who designs *farming* as well as raising stock, as yielding greater profits, each and every year, at less expense and trouble, and sooner and surer return, not only, than any other breed of *sheep*, but, than any other animal. When I find them excelled by any other *animal* in these essential, i. e. that yields the surest and greatest profits in the shortest time, I shall immediately change.

Pardon my occupying some space to 'Anon,' page 384, same No. I am happy to see him again in your journal: he is so fair, liberal and able, that you ought not to permit his pen to be idle. His "*if*" is well put in, for I claim not "that knowledge and judgment" he describes in my communication over the signature of "Valley of Virginia." In writing over my own signature now, I must disclaim all *intention* by doing so, of offering inducements to gentlemen to purchase of my stock, but as having some experience in sheep, it was quite proper I should venture my feeble pen in the discussion of the relative qualities of the different breeds of sheep, in order that farmers of the different sections of Virginia may determine which breed to them would be most profitable.

Although excelled by none in beauty and finish, the Bakewell or Leicester, owing to the manner in which they were originated, are notoriously defective in constitution, yet 'Anon,' found them profitable. As you will see, I have been importing none but the best of the improved Cotswold, and have been closely observing all importations of that breed, and with the exception of a few besides mine, I have no knowledge of any being imported into the United States. I have known many considered thoroughbred that were crosses of Cotswold on Bakewell or Leicester ewes.

Here let me correct an error:—Your able correspondent, C. (another whose pen should not be permitted to rust; such "birds can be made to sing" by assailing their position, not with the expectation of gaining any thing but defeat in such contest, but to enrich your journal by their essays,) has fallen into, page 198, vol. 12. The improved Cotswold and new Oxford are the same sheep. The originator

of the latter, from whom I have mostly purchased, wrote me they were pure Cotswold, that he gave them that name to distinguish them from the other flocks, as he had mostly carried the high prizes, and gentlemen were purchasing their bucks from him—there is no Leicester cross in them—the improvement brought about by judicious crosses and avoiding incestuous intercourse. They are notoriously a hard constitutioned sheep, and the committee on sheep in England strongly advised all breeds to take a cross of them, and to obtain early maturity, hardihood of constitution, size, enlargement of fleece, and propensity to take on fat. Mr. Randall of N. Y. on sheep, somewhere says, that the N. Y. farmers were parting with their fine wool sheep, not finding them profitable—some to go into the dairy business, others into the large early maturing sheep—and the butcher of New York, when he purchased a lot of muttons of me—some at \$35, some at \$25, each—said he could purchase the carcass of the merino delivered at his stall for \$1 each. Who is more alive to their own interest than a New York farmer who abandons them as unprofitable? Can this be the most profitable for Virginia? If so, then it must be in the fleece, and if 'Anon' will not admit that more money can be made to the Cotswold than to the Merino *fleece*, I shall conclude he has not the *right* breed of improved Cotswold, and of this there is some proof in the fact of his getting but about 7½ lbs. to the fleece *in the dirt*. I know from experience, negro cloth made from this wool doubly outlasts any other, the fibre is longer and stronger and makes a *much* stronger yarn, and although manufacturers complain, they do not give more for other wool per lb., and admit it makes more durable cloth for negroes. 'Anon's' sale of muttons was \$4 each, and says, "nor can the mutton be sold readily, if at all, for \$6 each." Of course in this he speaks of his own section of country, being in the dark as to his "whereabouts," I can know nothing about it: but as it must be clear to every mind that his valuable communication is free from all disposition "to disparage large sheep," I must conclude that either the butchers have not done him justice, or he has not the *right* breed of improved Cotswold, as will be seen, by reference to the statement hereinbefore made, in reference to sales of muttons this fall in this country. Will 'Anon' allow me to give an account of sales of muttons last *summer*, and some facts in connection with them? If my ability with the pen was equal to his, I could make it interesting to him; but if he is a farmer he will bear with my plain farmer language. The proprietor of one of the hotels of a watering place in this region was always a purchaser of the small breed of muttons, objecting to the *prices* for the Cotswold: circumstances induced him to purchase a lot of yearling part bred Cotswolds, and after that, in July and August last, (1852) bought all the yearling part breeds he could get at \$6½ each,

after shearing time and not fed one mouthful of grain, saying, he would hereafter purchase of this breed on the score of economy. Connect this with the sales mentioned before in this communication, and I claim for 'Anon's' candor and fairness an acknowledgment that no sheep, or arrangement of sheep, can remunerate like this in a grain, tobacco or cotton growing region. I agree with 'Anon' that "expectation ought not to be inordinately excited," and have stated nothing but plain, stubborn facts as known in this country, divested entirely of theory or speculation, and not even instancing thoroughbreds, in reference to the improved Cotswolds; and I here admit that the Southdown at four years old is a better mutton than a Cotswold at that age—but contend that the latter in his *yearling* form is as good (and gives as much or more) mutton than the Southdown at any age, and in this way more profitable to the farmer: the Cotswold when older tallowing too heavily for the palate, though the very thing for the butcher.

All England acknowledges the improvement of land by sheep and turnip culture, indeed, date their improvement from that; and so strongly is it acknowledged, that farmers are recommended to sow salt on all wheat lands manured by sheep, to strengthen the growth of straw to prevent its lodging: but then has 'Anon' lost sight of the fact, that although England largely manufactures, there is probably not one flock of small breed of sheep in England—it requiring too many mouths to make a small sum of money, and too small, and too slow (from the time it takes them to mature) to be profitable; and although it is admitted their manure improves the land, still it takes too many to manure a small piece of land.

I am too plain a farmer to have any thing to do with theory—I deal in stubborn facts only. In comparing the fattening properties, I allude to grain feeding alone as the surest way of testing it. Large numbers of small sheep have been fed in this country every year and by exceedingly prudent feeders, and yet I know not one now, who will agree to feed another, on account of its taking so much grain to fatten them as to render them unprofitable and injure the sale of their part bred. I presume, instead of filling themselves, lying down and ruminating like the Cotswold, they ramble a great deal, travel-off their food in place of converting it into fat—requiring more food to sustain their travel, which injures the grass. I have seen sheep so extraordinarily fat without suffocation, as to render me incredulous as to sheep dying from fat.

In conclusion, (do you not rejoice?) let me say to "C." and 'Anon,' if they will join you in your *dutiful* rambles to this region, we will give you all "A Highland welcome," and make them associate judges with you on all these matters.

JOSIAH WM. WARE,
Near Berryville, Clarke county, Va.
January 12, 1853.

For the Southern Planter.

MARL.

Mr. Editor,—Many years ago, before the introduction of marling, every unseasonable crop year, corn was imported into some neighborhoods of this county for domestic consumption, not enough being made for use. It was particularly the case in the neighborhood around Cabin Point, where a portion of the population was engaged in the lumber business, partly from necessity, as much of the land was so poor that it would not yield enough to pay for its tillage. After Mr. Ruffin discovered and made known the value of marl as a fertilizer of naturally poor and worn out soils, and recommended its application, a change soon took place. Now, from the same landing where a few years ago cargoes of corn were brought and retailed to the surrounding neighborhood, thousands of barrels of corn and a great deal of wheat are annually shipped! This is marvellous, yet it is a fact. The product of some farms, where skill and industry obtained, has been quadrupled, and all have been more or less improved; those where clover and peas were used as auxiliaries to the marl, especially so. Swift said, "that whoever could make two ears of corn or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together." We Virginians do not agree with the learned Dean, because, perhaps, we are a race of politicians ourselves.

NEMO.

Surry County, Jan. 20, 1853.

For the Southern Planter.

M'CORMICK'S REAPER.

Mr. Editor,—I notice in your last number a communication from R. Grigsby, Esq. referring to one of mine, written by request of the Agricultural Executive Committee and published by its order. When a gentleman is solicited to write an article on any subject, he is, of course, expected to express his *own* views. As it is by a collision of sentiment that the true light is frequently elicited, I am rather gratified than otherwise at such collision—desiring that error may be exposed and truth made triumphant. If there is one expression in my communication deemed personally disrespectful to Mr. M'Cormick, it was unintentional, and is most cheerfully withdrawn. It is sufficient to command my admiration for any individual to attempt an agricultural improvement, as even failures in such efforts have furnished materials for subsequent success. But if the manufacture has not answered the purpose for which it was designed, or is

defective in its construction or performance, a declaration to the contrary cannot be properly desired by any person. The term "humbug," amongst farmers is only intended to convey the idea or opinion that the *article* (not inventor) falls *very far* below the estimate of its friends, though they may be conscientious in their recommendations.

I was placed in the position somewhat of a reviewer. Aware of the sensitiveness of inventors and their friends, I thought the fairest way of discussing the subject of reaping machines was to make special allusion to *every* one of *both* kinds I had ever seen, or concerning which I had received reliable information. As some gentlemen are, I think, unjustifiably fastidious on the subject, even when intended for the promotion of the public good, I would not have introduced names except to afford the opportunity of correction, if my information or impressions were erroneous, and thus remove injustice. I named the owners of about twenty-one of M'Cormick's machines, or persons who had tried that number. I have conversed with all but two or three, and repeat the declaration that *not one* has performed satisfactorily, while seventeen of Hussey's had succeeded well. With these tangible accessible facts what is the use of talking or writing about personal or partisan attacks, or what the machine has done elsewhere? What individual, possessed of such facts, would be so deficient in philanthropy as not to communicate them when it was rendered his duty, even at the risk of animadversion or vituperation? None can wish more sincerely than myself that it were otherwise. I used the expression "half hour's trial" because I had seen one run about that time in a manner to secure a premium against the world, and at its expiration laid aside as worthless. It cuts by means of a saw, or serrated blade, and when the wheat affords sufficient resistance, and stands erect, and the blade is sharp, it does cut admirably; but if the wheat is inclined or light, so that the reel cannot act on it, or the blade becomes dull, it passes over it, merely beating it to the ground. Again, it seems to me that no set of human muscles can withstand the labor longer than half an hour of walking as fast as horses, and at the same time raking out wheat by a lateral muscular operation. It, however, in this respect has some advantage of Hussey's, in placing the wheat at the side. Both machines need the improvement of discharging the wheat, as even when riding the labor to the hand is considerable. I understand there is an improvement in Hussey's by which the wheat is thrown at the side; but with too much additional machinery and labor. I make these suggestions, hoping for a correction of the difficulty.

Mr. Grigsby remarks, "I also appeal through you to Mr. Booth and the Executive Committee, to give Mr. M'Cormick a chance," &c. and suggests James river as a proper arena for the opportunity. James river is a great

place for good farms, good farming, good fellows, and, indeed, every thing that is good, (except Mr. Grigsby might add M'Cormick's reaper,) and I could not insist upon a change of venue, (two trials would not be too many,) but I can only say, that my residence is in Nottoway county, about thirty miles from Petersburg, near the South Side Rail Road, connecting with the Richmond and Danville Rail Road, and furnishing a rail road connection with both Richmond and Petersburg—all rail roads are liberal in such matters—I have sufficient surface prepared for the reaper in high land and low grounds to afford a full trial—I will furnish every facility in my power and "a good harvest dinner," or more, and I will be very glad to see Mr. M'Cormick, Mr. Grigsby, or any of their friends or others feeling an interest in such matters. Three members of the Executive Committee are convenient, and as steam annihilates distance the others can attend without difficulty. I think I can safely promise a good attendance of the Executive Committee and the Agricultural Club of Nottoway and others. I repeat, I shall be gratified to afford the "chance" desired and the "harvest dinner;" and, moreover, I will be gratified if Mr. M'Cormick or any body else can show and operate a machine superior to Mr. Hussey's, for it is idle to suppose any farmer to be actuated by any other impulses or prepossessions than those which favor the triumph of merit.

EDWIN G. BOOTH.

Nottoway, Feb. 15, 1853.

For the Southern Planter.

GUANO AS A PERMANENT FERTILIZER.

Mr. Editor,—At your request, and for the information of the large number of farmers yet inexperienced in the use of guano, I proceed to give you some account of my own experience with it, and opinion of its effect as a permanent fertilizer, in conjunction with clover—and that this article may not cumber the pages of your valuable journal, shall condense it as much as possible.

I commenced using the article in the year 1847, and applied 3 tons procured in Boston, there being none nearer at that day. This was, I believe, the Schabo Island Guano. The next year I used ten tons of Saldana Bay Guano, and every year since have applied from ten to fifteen tons, having spread it over a surface of near four hundred acres of land—some in our forest, and the rest on the Rappahannock river. Until last fall I have always used plaster with it, in the proportion of one part of plaster to two of guano. Last fall I used it without plaster, and certainly if I am to judge by this one trial without plaster, I have gained nothing by using it alone.

It is right that I should show the only in-

stance of failure on wheat in all this time, and will do so, as a former article of mine might lead some one into error. In May, 1851, I commenced fallowing Rappahannock river land for wheat, and sowed Peruvian Guano, 200 lbs. per acre and 100 lbs. plaster before and as the land was fallowed. Before the time for a second ploughing of this land preparatory to seeding wheat, I had a prodigious growth of crab grass; and on all this land I had a complete failure of the wheat crop: whether from the grass rendering the land too porous for wheat, or some other reason, I do not say; but there is now a fine stand of clover, having a very strong and thrifty appearance, and the land itself many shades darker in color.

In the winter of 1851, I ploughed up two fields guanoed and clovered in the years 1847 and '48. All this land was previously very poor; part of it a mere desert. The growth of clover had been very good. One field, that guanoed in 1848 with 400 lbs. per acre, made over seven barrels of corn per acre—that guanoed in the fall of '47 with 200 lbs. per acre, failed, in consequence of worms cutting off the corn, to make more than five barrels per acre. On both these fields, at the time of ploughing, I applied broad cast about 125 lbs. of Peruvian Guano per acre. It will be remembered that the year 1851 was exceedingly dry, and all the month of July, the blades of corn were so wilted, that it was impossible the corn could make well. The crop was certainly a good one for any high land in so severe a drought.

In 1852 I ploughed a field for corn, guanoed in the year 1849 with 300 lbs. of African Guano (Saldana Bay) without applying any more guano. On this land, where formerly clover would not grow, I had a remarkably fine growth of clover. I sowed the seed in Sept. when the wheat and guano was seeded: and one month after the harvest of 1850 the clover was all over the field knee high to a tall man, and entirely hiding the land. It was the same or nearly so, in 1851, a very dry year. This field last year made over eight barrels of corn per acre—part of it, a large part, having a very imperfect stand of corn. This land before it was guanoed in 1849, and clovered, was extremely poor, it would not have averaged over two barrels of corn per acre.

I also planted last year a piece of land from which the pine growth had just been cleared, on which no manure of any kind was applied, except about 100 lbs. of guano per acre, spread broad cast before ploughing. Owing to certain circumstances, I was unable to do more than half work the field, yet it made about six barrels of corn per acre. My conclusion then is, that guano is as permanent as any kind of manure: and when the small expense of the application of it to the land is considered, the cheapest manure with which I am acquainted.

My opinion is, that for corn or any other crop, it should always be applied broad-cast,

it being not only a direct fertilizer in itself, but also a solvent of otherwise insoluble vegetable remains in the soil, and this I conceive not its least valuable effect.

I do not deem it necessary to say much about its effect on the wheat crop on very poor land. It has become nearly as necessary hereabout to farmers as bread to a hungry man. The effects are various; depending on quality of land, and the quantity and mode of application, perhaps. I have known as high as 30 bushels per acre to be made from very poor land.

And in conclusion, I would strenuously advise all farmers to sow clover wherever it is applied, and to use plaster either with the guano, or on the surface of the land.

I am, very respectfully,

H. FAIRFAX.

Cameron, K. Geo., Feb. 3, 1853.

For the Southern Planter.

THE SCIENCE AND PRACTICE OF AGRICULTURE,

EXPLAINED BY WAY OF QUESTION AND ANSWER.

Mr. Editor,—I send you the first lesson of the *Science and Practice of Agriculture, explained by way of Question and Answer*. Should you think this mode of conveying instruction will contribute to the usefulness of your columns, it will be continued; otherwise, you may commit it to the flames, and the writer will approve of your better judgment.

AN ORIGINAL SUBSCRIBER.

Question. What are the fundamental principles of agriculture?

Answer. To keep the land dry, clean, and rich.

Q. What is the first principle in order?

A. To keep the land dry.

Q. What are the benefits arising from draining?

A. It corrects the sourness, or acidity, which is so inimical, to the growth of the nutritive class of plants. It also removes the adhesiveness of wet soils, thus rendering them accessible to the atmospheric influences—it moreover increases their temperature.

Q. If we plough or manure lands under such circumstances, do we derive the full advantage of these operations?

A. Their benefits are obtained only to a very limited extent.

Q. What is the most approved system of draining?

A. The Deanston or furrow system, now being pursued in Scotland.

Q. In what does this consist?

A. "The field is thrown into ridges, of from sixteen to thirty feet broad, according to the tenacity of the soil in the direction of the slope,

and underdrains are laid in every central furrow, so deep, that when covered, the materials of the drain shall not be disturbed by the plough. A cross drain is laid upon the upper margin of the field, to catch the water coming from above, and another at the lower side, which should be six inches deeper than the furrow drains, to receive and convey off the water from them."

Q. What may be observed in regard to this mode of draining?

A. "Although the agriculturist may not be able to reach, in every respect, the model proposed to him, it is yet important that the model be good in itself, so that his own practice may become as perfect as the circumstances in which he is placed will allow."

Q. What is the second principle?

A. Keeping the land clean.

Q. Why is this process necessary?

A. Weeds and noxious plants spring up spontaneously, and increase with exceeding rapidity. If, therefore, we allow the nutritive powers of the soil to be expended upon these, the cultivated plant must suffer in proportion.

Q. May we expect that these natural productions of the soil will ever be finally extirpated?

A. "Cursed is the ground for thy sake. * * * Thorns, also, and thistles shall it bring forth to thee. * * * In the sweat of thy face shalt thou eat bread, till thou return unto the ground."

Q. What is the third principle in order of good husbandry?

A. Richness—almost universally attainable by manuring only.

Q. How would you define manure?

A. Any thing, whatever, may be called manure which, when applied to the soil, either furnishes the proper food of plants, or is essential to their structure.

Q. Why is manuring necessary?

A. Plants derive their growth and nourishment from those elements with which a bountiful Providence has enriched the earth. This store has been confided to us in trust, and it is both our interest and duty thus to regard it. The farmer, therefore, who carries off the annual contributions from this fund, in the form of crops, and makes no return, may be likened unto the spendthrift, who wastefully expends both capital and interest. On the other hand, he who uses his best endeavors to make a compensating return for what he receives, is not only useful to his own generation, but is thus enabled to transmit his patrimony, unimpaired, to posterity.

Q. If the operations of agriculturists were governed by the foregoing principles, what would be the result?

A. Agriculture would be a means of wealth, independence and happiness, and the soil of a country progressively improved.

ON THE NUTRITION OF PLANTS.

Q. What are the influences through the agency of which the growth and nourishment of plants is maintained?

A. The soil, the atmosphere, and solar light.

Q. Of what does the soil consist?

A. Of sand or silica, clay or alumina, lime, magnesia, oxyde of iron, potassa, and some one or two other substances, soda, and decomposed animal and vegetable matter, in variable proportions.

Q. Of what is the atmosphere composed?

A. The atmosphere is composed essentially of two gases, oxygen and nitrogen; it also contains aqueous vapor, and a small proportion of carbonic acid.

Q. Is light simple and homogeneous, or a compound.

A. Light, when resolved into its constituent elements, was found by Sir Isaac Newton to be composed of seven different colored rays: violet, indigo, blue, green, yellow, orange and red.

Q. Are not these three influences equally deserving of our attention?

A. Each is alike essential to the result, and hence must be alike entitled to our regard.

Q. Which one of them has not received any thing like a proper share of attention?

A. The influence of solar light.

Q. How would you illustrate the importance of studying these several agents in connection?

A. A house consists of a great number of parts; each of which was included in the design of the architect, and is as much the product of his ingenuity and skill as the building itself. These parts were formed, and may exist, separately; but in this state, they answer no valuable purpose. It is only when brought together, and arranged in proper order, that they constitute a building.

In like manner, science consists of a number of particular facts. Whilst these remain isolated, the mind will be wearied with attempts at particular solutions. It is only by bringing the separate links together, and connecting them, that we can complete the chain of cause and effect which binds the series into one harmonious whole.

ALIQUIS.

For the Southern Planter.

THE CAUSE OF SMUT IN WHEAT.

Mr. Editor,—I make a few extracts from a paper published in the Universal Magazine in London, in the year 1757, on the cause of smut in wheat, "and on several other useful particulars relating to that useful species of grain."

"The smutty ears are perfect in the chests, and almost so in the fulness of the grain, even so far that the chests of many ears did strut; so that the smut must fall on the grain late, and when it is towards a fulness, for it cannot grow after it has taken smut. I could very rarely find a smutty ear, but all its tillows were so too; so that from thence I suppose the smut arises from the root, and not from any

poison in the air, which would not distinguish between the tap root and the tillow. I also observed in the fibres of the roots of the smutty wheat a general brittleness, and the earth more starchy and dry about them, and I perceived, for the most part, a stream or streak of a brown stain, the breadth of a pin, in the first joint above the root. So that I am apt to believe that the smut arises from a total defect of sap at the root, and a blight from a partial one, when some of the fibres may still live; so the grain being feebly supported does only shrink or wither."

"Some farmers were saying, that dunged land, as had been always observed, was more subject to smutty wheat than folded land. If so, the reason must be, because the dung hollowed the ground, and, therefore, the longer the dung, the greater the danger."

"The original of brining and liming seed-wheat seems to be purely an English practice."

"I had wheat brined and limed for sowing, but much rain coming, and the ground being wet, I could not sow it for a fortnight. At a fortnight's end I had several people with me about measuring harvest work; so asked their opinion, whether such wheat would grow or not; one said, he had known wheat that had not been brined and limed above a week, and a great deal of it did not grow. Another, it depended on the high degree to which it was limed, if it was so highly limed that it shrunk and shriveled, it would not grow; but in case the kind looked plump and smooth, there was no danger. A third was of opinion, that there was great difference in the manner of brining it, for if the wheat had been steeped in brine, it would be much apter to burn by lying in lime, than it would have been only sprinkled with brine in the morning it was limed. Note, this brined wheat was not sowed till November the 7th, which was seven weeks after it was limed, and yet it grew and came up so thick, that it seemed to have received no prejudice."

"It was universally observed, that the wheat that was killed by the winter of 1708, was not killed by frosts, though they were very intense, but by the winds, which drove the frosty particles in such a manner, as to penetrate into the roots of the corn; this may be supposed to be effected with their angles, which lanced the fibres and cut them to pieces, like as fire by its subtle corpuscles in its rapid motion may be supposed to penetrate and divide bodies. It was plain the wheat on our hills in Hampshire and our high grounds, was cannonaded; for the driven snow, as it was carried to the hedges by the wind, battered the wheat and cut off the blade, and the wounds it made opened portals, for the fierceness of the weather to enter the roots. Wherever the wheat lay out of, or sheltered from the wind, in those places it was saved; but if the ridges and furrows lay parallel to the north, or north-easterly wind, then the wheat in the furrows was also destroyed; but wheat lying under the shelter

of hedges was saved. From the sad experience of this year, we may in our hill countries conclude it to be good husbandry to have a special regard, in the sowing of wheat lands that lie exposed to the north or easterly winds, to sow under furrow, or at least a cast over and a cast under, that thereby the wheat may lie the deeper, both from the penetrating power of the winds, and from their power of uncovering the earth and laying the roots of the corn naked. Also, to leave our grounds a little rough and not harrow them too fine, it being observed that the wheat saved itself much better, when the knobby clods sheltered it. Also, to have a regard, when grounds lie bleakly exposed to those winds, not to cut down the hedges, which may be a fence to it, before February."

The Magazine says, "The above extracts are from Lisle's Husbandry," a work published about that time.

For the Southern Planter.

ROLLING CORN IN GUANO—PREVENTION OF SORE THROAT IN HOGS.

Mr. Editor,—Owing to your oft repeated request to subscribers to send you an account of any experiments they may make in the way of farming, and also having seen it often stated, that seed of any sort would be killed by coming into direct contact with guano while sprouting: I have concluded while sending my subscription to your paper, to give you an account of a small experiment I made last spring rolling corn in guano before planting. I soaked my corn until it was considerably swollen, and then put in two portions of guano and one of plaster, stirring the corn until it became perfectly coated with the mixture, and I assure you it came up finely, and I did not have to replant a single hill where the guano was used. It had a much better color, and got out of the way of the cut-worm much sooner than that where plaster alone was used. I think it quite a desideratum to have something that will give corn a good start and push it up out of the clods, and at so trifling an expense: a bushel of guano is enough to plant a large field used in that way. I have frequently noticed, that during a cold spring, corn is a long time taking a start, and sometimes is almost entirely destroyed by the cut-worm, so I would recommend all farmers to give my plan (for I shall always pursue it hereafter,) a trial, and if they are not benefited, it will not cost much. I cannot say whether it affected the yield of the crop but I think it did as much as could be expected from so small a portion.

I have frequently lost many hogs with swelled throat, the only name I know for a very troublesome disease, and some one told me that spirits of turpentine, given on a little corn two or three times a year, was a preventive. I have since been in the habit of using

it, and have never lost a hog with that disease, and believe it is entirely owing to the use of the turpentine, as I frequently lost them before.

Yours, truly,

JOHN L. BROOKE.

Fauquier, Feb. 14, 1853.

From the Ohio Cultivator.

DRAINING AS A MEANS OF IMPROVING LANDS—AMMONIA IN RAIN WATER.

We have long been convinced that no improvement would be found so beneficial on most of the clay lands of Ohio, as *under-draining*. But the *expense* of the work as compared with the value of the land has hitherto been an insuperable objection to such improvements, in the minds of our farmers. The time has come, however, when the value of the land, and the ability of the owners, render it both expedient and profitable, that under-draining should be practised on many farms, and we are convinced it will be done quite extensively as soon as our farmers understand the advantages and *profitableness* of the operation, and can procure the best material for its performance.

Every farmer understands the importance of draining *wet* lands, so as to remove standing water from the *surface*, but very few have any just conception of the injury done to crops and the soil by an excess of moisture *beneath* the surface, or of the benefits which result from the filtration of rain water through clayey soils, where it is allowed to pass off into under-drains, or a porous subsoil. In speaking, therefore, of under-draining as a means of improvement, we have reference to lands not commonly ranked as *wet*, but those of a level, clayey character, with compact subsoil, and forming a large portion of the best wheat lands in Ohio. Experience has abundantly shown that thorough draining of such lands will pay a liberal return for the capital invested.

Chemical science, and experiments in practical cultivation combine to prove the importance of *ammonia* as a promoter of vegetation. It is this element which gives the principal value to guano and stable manure; (see article on ploughing in green crops, in the Ohio Cultivator, October 15, 1852;) and as rain water, as it falls from the clouds, contains a small portion of ammonia, the importance of securing this valuable substance in the soil, instead of al-

lowing it to run off the surface, is one of the strongest arguments in favor of under-draining and deep tillage. It is also an argument for which we are indebted to modern science, and one that has given a great impetus to these kinds of improvement in Great Britain. But there are many other ways in which draining is found to operate as an efficient means of improving lands; and here we cannot do better than to extract a few paragraphs from the volume of C. W. Johnson, (of England,) on "Modern Agricultural Improvements:"

It was an early and just observation of those great improvers of agriculture who followed in the train of Walter Blyth and of Jethro Tull, that *the removal of land water is the foundation of all good farming*. It is true that the axiom is admitted pretty universally, that it is an operation now carried on with almost annually increased perfection and profit to the farmer, and it would perhaps be still more systematically and advantageously extended if the occupier and the young cultivator more clearly understood the ill effects which land water produces, even at considerable depths, on the crops which grow over it.

The question sometimes occurs to the young farmer, "What difference is there between rain water and that which was once rain water too, that in the land? Why should we covet an abundant supply of the first, and be anxious for the removal of the last? Is there any difference in their composition?" This difficulty the chemists of our time have very readily answered.—They have shown, amongst other causes of difference in their value, that rain water contains ammonia, of which land water is commonly destitute. This presence of ammonia in rain water has been placed, as Liebig remarks, beyond all doubt; it may also be detected in snow water, and it is worthy of observation, that the ammonia obtained by the chemical philosopher from these sources possesses an offensive smell of perspiration and animal excrements, a fact which leaves no doubt respecting its origin.

It is to the presence of ammonia, then, in such waters, that one source of this effect may be attributed. It is true that the ammonia contained in rain water is in very minute proportions, and in spring water the proportion is probably still less; but then it must be remembered, what is not commonly very clearly understood, that the weight of water which annually falls upon the farmer's fields is very great. "If;"

remarks Liebig, (*Organic Chem.* p. 75,) "a pound of rain water contains only one-fourth of a grain of ammonia, then a field of 40,000 square feet must receive annually upwards of 80 lbs. of ammonia or 65 lbs. of nitrogen (ammonia is composed of nitrogen and hydrogen;) for, by the observations of Schubler, (made in Germany,) about 700,000 lbs. of rain fall over this surface in four months, and consequently the annual fall must be 2500 lbs. This is much more nitrogen than is contained in the form of vegetable albumen and gluten, in 2650 lbs. of wood, 2800 lbs. of hay, or 20 tons of beet-root, which are the yearly produce of such a field; but it is less than the straw, roots and grain of corn (wheat) which might grow on the same surface would contain."

[In Ohio, and other central parts of the United States, the fall of rain is about 36 inches per year—which is $7\frac{1}{2}$ gallons, or 75 pounds to the square foot—1625 pounds to the square yard—3932 tons to the acre. The average amount of rain in England is very nearly the same as in this country, but falls more frequently, in lighter showers. It is easy to see that although, as has been stated, the amount of ammonia in a pound of water is very small, yet the thousands of tons which fall in a year upon an acre of land may contain as much as any kind of growing crop demands.—*Editor Ohio Cultivator.*]

Of the use of this alkali to the farmer's crops there is no doubt, for as the same great chemist adds, "no conclusion can have a better foundation than this, that it is the ammonia of the atmosphere which furnishes nitrogen to plants." The way, too, in which ammonia is formed in the soil, by the decomposition of its organic matters, affords us one easily understood reason for the advantages derived by the removal of its land water, a process which is thus clearly explained by Professor Johnston: "Ammonia is naturally formed during the decay of vegetable substances in the soil. This happens, either as in animal bodies, by the direct union of their nitrogen with a portion of the hydrogen of which they consist, or by the combination of a portion of their hydrogen with the nitrogen of the air; or when they decompose in contact with air and water at the same time, by their taking the oxygen of a quantity of the water, and disposing of its hydrogen at the moment of liberation, to combine with the nitrogen of the air, and form ammonia. In the two latter modes, ammonia

is formed most abundantly when the oxygen of the air does not gain the readiest access. Hence, in open subsoils, in which vegetable matter abounds, it is most likely to be produced; and thus one of the benefits which arise from thorough draining and subsoil ploughing is, that the roots penetrate and fill the subsoil with vegetable matter, which, by its decay in the confined atmosphere of the subsoil, gives rise to this production of ammonia."

It is evident, then, that if the surface or subsoil is already surcharged with stagnant land water the entrance into it of the rain water, which is so beneficial to the crop by the presence of ammonia and atmospheric gases, and also by promoting the decomposition of the materials of which the soil is composed, is entirely prevented; and, moreover, by this occupation of the soil by land water, another ill effect upon the soil is produced, its temperature is reduced. "The presence of too much water in the soil," says Professor Johnston, "keeps it constantly cold. The heat of the sun's rays, which is intended by Nature to warm the land, is expended in evaporating the water from its surface; and thus the plants never experience that genial warmth about their roots which so much favors their rapid growth."

An important effect is observable in all soils properly prepared to receive heat and water, and permit their descent, viz. that the transmissions of accessions of heat downwards continues during the afternoon of the day (in summers,) and throughout the night, whilst the superstrata (chiefly from seven inches upwards) are losing some amount of their heat by conduction upwards and radiation. Such is the influence of good and deep drainage and ploughing upon the temperature of the soils thus improved. But the benefit does not terminate there; others follow from those operations, advantages which are thus well described by Professor Johnston: "Vegetable matter becomes of double value in a soil thus dried and filled with atmospheric air. When soaked in water, their vegetable matter either decomposes very slowly or produces acid compounds, more or less unwholesome to the plant, and even exerts injurious chemical reactions upon the earthy and saline constituents of the soil. In the presence of air, on the contrary, this vegetable compound decomposes rapidly, produces carbonic acid gas in large quantity, as well as other compounds on which the plant can live, and

even renders the inorganic constituents of the soil more fitted to enter the roots, and thus to supply more rapidly what the several parts of the plant require.

It is to such labors as these that the farmer's gratitude is justly due: their value can hardly be too highly rated, and in the result no mean harvest has been produced; for there is no branch of agriculture that has attracted more general and successful attention within the last few years than the improved drainage of the land. Science has here gone successfully hand in hand with practice, to a very useful and very profitable extent. "It was only in 1835," says Mr. Pusey, "that we heard in England, that a manufacturer in Scotland, Mr. Smith of Deanston, had found the means of making all land, however wet and poor it might be, warm, sound and fertile, and that this change was brought about by two processes, thorough draining and subsoil ploughing. His rule of draining was this, that we are not to endeavor merely to find out hidden springs, and to cut them through by a single drain, which in some of our books appeared to be regarded as all that was necessary, but that as the whole surface of retentive soils is rendered wet, not by accidental springs, but by the rain, the whole surface of the field must be made thoroughly dry by the under-drains running throughout at equal distances. Any field," he said, "however wet, might be so dried, provided these under-drains were cut sufficiently near to each other." This was the principle of thorough or frequent draining asserted by Mr. Smith of Deanston, in 1835; and this principle, which was then new and startling to the generality of farmers, may now be regarded as firmly established.

As regards furrow draining on tenacious clay soils; the drainage of these soils has generally been done in shallow depths, under the prevailing common opinion that otherwise the water would not get into the drains. The contraction which the clay beds undergo when cut through by parallel drains has thus been entirely overlooked. This contraction, however, is most important, so much so (as I have found by experience) that drains dug from 30 to 40 inches deep have operated to much greater advantage than those of shallower depth. The bed of clay contracts itself near the drains as deep as the drains are made; and the deeper the bed of clay is contracted, the larger will be the fissures for the water to percolate through to the drains. In well

drained land, the water does not enter the drain by the furrow, but percolates through the fissures (formed by contraction) from the ridge to the drains.

GRUELS FOR IMPROVING CATTLE, &c.

In the "Edinburgh Journal of Natural History," we find the following passage: "We are assured by Mr. Youatt, that in Auvergne fat soups are given to cattle, especially when sick or enfeebled, for the purpose of invigorating them. The same practice is observed in some parts of North America, where the country people mix, in winter, fat broth with the vegetables given to their cattle, in order to render them more capable of resisting the severity of the weather. These broths have been long considered efficacious by the veterinary practitioners of our own country in restoring horses which have been enfeebled through long illness. It is said by Peall to be a common practice in some parts of India to mix animal substances with the grain given to feeble horses, and to boil the mixture into a sort of paste, which soon brings them into a good condition, and restores their vigor. Pallas tells us that the Russian boors make use of the dried flesh of the Hamster reduced to powder, and mixed with oats; and that this occasions their horses to acquire a sudden and extraordinary degree of *embonpoint*. Anderson relates, in his 'History of Iceland,' that the inhabitants feed their horses with dried fishes when the cold is very intense, and that these animals are extremely vigorous, though small. We also know that in the Feroe Islands, the Orkneys, the Western Islands, and in Norway, where the climate is very cold, this practice is also adopted; and it is not uncommon in some very warm countries—as in the kingdom of Muskat, in Arabia Felix, near the Straits of Ormuz, one of the most fertile parts of Arabia, fish and other animal substances are there given to the horses in the cold season, as well as in times of scarcity."

A NICE WAY TO DRESS A COLD FOWL.—Peel off all the skin, and pull the flesh off the bones in as large pieces as you can, then dredge it with a little flour, and fry to a nice brown in butter; dress it up in rich gravy, well seasoned, and thicken with a piece of butter rolled in flour; just before you serve it up, squeeze in the juice of a lemon.—*Ex.*

CLOVER-SICK LAND.—A mixture of nitrate of soda, gypsum and salt, produced a deep green, dense mat of clover; when the part so dressed was thin, pale and hungry. The quantity having been only a few acres, it must be regarded as a guide to experiment, rather than an established remedy. A ton each of gypsum and fishery salt, and half a ton of nitrate of soda, well mixed, may be strewed, in damp weather, or light rain, over fifteen acres. Where fishery salt cannot be had reasonably, hide salt or any other foul with animal matter may be substituted. Clean salt I have not tried.—*W. Prideaux.*



THE SOUTHERN PLANTER.

RICHMOND, MARCH, 1853.

TERMS.

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All business letters connected with the Planter must be addressed to P. D. Bernard, Richmond, Virginia.

It is indispensably necessary that subscribers ordering a change, should say *from what, to what* post office they wish the alteration made. It will save time to us and lose none to them.

SEVERAL MODES OF PLANTING, MANURING, CULTIVATING AND KEEPING THE IRISH POTATO.

A correspondent of January 25th asked information about raising and keeping Irish potatoes, and also about the best mode of managing a certain piece of land. Of the land, not having seen it, we cannot tell much, and perhaps could not do any thing for it if we had seen it. But as an editor, like a physician, must prescribe something in order to keep up his reputation, we would say, that it seems to us that the land, "a light, black soil, very prolific in grass, weeds and *sheep sorrel*, capable of bringing a good crop of corn, but incapable of producing wheat or oats, abounding in fibrous roots and other vegetable matter, which, even after ploughing, remains for months with little or no change," it seems, we say, that the land suffers primarily from surplus water, and superabundant vegetable matter, and secondarily and derivatively from acidity. If this be so, the remedy is very simple, and, in view of its advantages, very cheap. Let it be drained of its surplus water, and then apply lime copiously. In this particular case we should think quicklime, and perhaps two or three successive doses, say, one a year, after every fallowing, would be the best form of application. But for the details of that business we would refer our correspondent to a book which if he has not now, we beg, for his own credit, that he will get as soon as he goes to Richmond—we mean the final edition of the *ESSAY ON CALCAREOUS MANURES*.

With respect to the potatoes, we present him two plans—that followed by Mr. JOSEPH RENNIE, who is one of the most successful and approved practical market gardeners near Richmond; and another, which, in localities where it can be practised, is the best we have found out, after having tried several. It is simply to cover the ground thoroughly with straw or leaves, having first dropped the potatoes. The communication of our own on this subject republished from the Planter of February, 1848, page 42, which will be found at the bottom of this article, will explain the process (and its rationale,) which we practised then, and have practised since, with uniform success, and which is well known and very common in our county wherever the materials

to cover with can be had or spared. As dry as last season was and as unfavorable to the potato crop, the best potatoes, by long odds, that we saw, and equal to the best crop of any year, were grown upon straw covered land.

The only failure we ever heard of attending this plan was our own in 1851. Having planted the potatoes, we waited until they came up and then applied a heavy coating of straw to them. The consequence was that the vines were wilted and killed, and it was so dry that the tubers never sprouted again, and we lost the whole crop—a proof, by the way, of the excessive drought of that year; for in an ordinary season the vines might have been killed several times and would have sprouted again, as is not unfrequently the case with the early plantings when frosts nip them.

The best plan for raising very early potatoes for family use is to rely upon *volunteers*. We have now for four years had them very early from the same piece of ground—a small plot in the garden—which has been regularly manured and ploughed every fall or early winter, but not planted; for the small tubers left at the summer's digging continue to grow, and serve abundantly for seed. But the crop, though a very good one in point of quality, and ample for a family supply, is hardly enough for marketing.

Another mode of getting early potatoes, recommended to us by a lady friend of ours, who is the best kitchen gardener we know, is to plant late in the fall and cover with straw or leaves—leaves and other fall sweepings of a yard will answer. She told us that as long as she practised this plan she was sure to have a dish of potatoes on the first day of June, which is early for this country.

This latter mode may answer for those gardens which do not admit of fall ploughing or spading.

SPRING GRANGE, NEAR RICHMOND, }
February 7th, 1853. }

Mrs Editor,—As you desire me to write out my practice in the cultivation of the Irish potato I will do so, and if you think it contains any thing that will be of use to others it is at your disposal. But the cultivation of the potato is so general and so well understood, and so much has been written on the subject, that you will find my practice of little use; still, if you can select from it any thing that may help

the inexperienced, it will answer the purpose for which it is written.

1. *To Prepare Manure*.—We have preferred stable manure with straw litter about half rotten, or guano, or both. Other manures, such as hog or cow, can be mixed with the stable, but no corn stalks.

2. *To Prepare the Seed Potatoes*.—I have always cut mine about a week or ten days before planting, which gives the wound time to heal, and also saves time, as they can be cut when other work of importance cannot be done. They ought to be spread out on a cellar floor after cutting, to dry, before being put in heaps. Some cut and then roll in plaster, which may answer if not cut beforehand, as above advised.

3. *Preparing the Ground*.—Much depends on working the soil when in proper order—that is when it pulverizes most freely. It ought to be ploughed at least six or eight inches deep and well harrowed; and if not broken fine then, it should be rolled or otherwise reduced to fine tilth. As to the time of planting so much depends on the soil, climate, season, &c. that no particular time can be fixed. I have succeeded best by planting from the 10th to the 20th of March, for my main spring crop. They have come up stronger and more equal than when planted earlier, and are not so liable to be cut down by our late frosts.

4. *Method of Planting*.—I will name but two, as they are the most simple, expeditious and successful of any that I have tried. The one is to spread the manure broadcast and plough it in, and the other is to spread in the rows and plant the potato on the manure. If the ground be mellow and somewhat rich and the manure not too long, should prefer to spread evenly over the ground and plough it well in. It is very important that the manure should be well broken and just sufficient to cover the ground. The sooner the potatoes are planted after the manure is spread and ploughed in, the better. The furrows can be drawn with the single plough about two and a half feet to two feet nine inches apart from row to row, and the seed can be covered with the plough. If manured in the row, it will require the furrows to be a little deeper, and the potato to be planted on the manure about nine or twelve inches apart in the row. If manured with guano, draw the drills the same width, sow the fine guano along the drill, say about three hundred pounds to the acre, and run a coultter in the drill after sowing, and then with a fork or hoe break a little of the earth from the ridges in the bottom before planting the potato.

5. *After-Culture*.—We work our potatoes only once, and that as soon as possible after they are fully up, say from four to six inches high. I have worked them in two ways: first, I have run a coultter close to the potatoes on each side, and then hoed the weeds from around them, completing the working by earthing them up with a small plough; and sometimes I have ploughed the earth from the potatoes,

and thrown it back again, so as to loosen the earth around them.

I ought to have stated that in covering the potatoes with the plough, if early, I leave them until all fear of frosts are over and then harrow down to about four inches of the potato; but if it is a late planting, and the ground is in good order, I run a light roller along the hills, which leaves them the right depth.

For late planting any time in June suits us; and they might be planted a little farther apart, say three feet and at least one foot to fifteen inches in the row. As the sun is very hot in June it is best to plant in the morning or evening, when the ground is cool.

I have but little experience in keeping the potato of the spring crop, and do not know that they can be kept good. I think the best way for the fall crop is in pits, either round or oblong, made like the roof of a house, say four feet wide and as long as is convenient; then cover with straw or hay, and upon that, earth ten or twelve inches thick. If a turf is put on the top so as to prevent the wet going down, the better. A little litter might be thrown over all in very bad weather.

JOSEPH RENNIE.

—
ANOTHER MODE.

Mr. Editor,—Your correspondent, "H." from Amherst, "would like to know, through the columns of the Planter, what has been the experience of some of our extensive potato raisers in Virginia," as to the effect of soil and mode of planting on the soundness of the Irish potato. Although not an "extensive potato raiser," I venture to give "H." my experience in the premises, and am very sorry to say that it differs widely from his own.

Selecting my seed of a productive and hardy variety, and of unsuspected soundness, I tried my fall crop in two modes:

1. About two-thirds of an acre was cleared, grubbed, and coultured only once, merely to aid the grubbing; the rows, about two feet wide, were laid off as shallow as possible with a shovel plough; and the potatoes, *cut and not plastered*, were dropped about a foot apart; and the whole completely covered about six inches thick with leaves, having brush superposed to keep them in place. The land was not touched again until the potatoes were gathered. I had seen this plan ingeniously recommended as producing a degree of coolness and moisture which would amount to an artificial climate, such as the potato delights in, combined with a porousness, said to be best suited to its habits. The result, in point of product, fully justified my expectations. The potatoes were unusually large and very abundant, the best crop, judging by the eye, I ever saw; but they were badly injured by what I took to be rot. They were in all stages of a decay, which seemed to commence in a concentric ring of a light color, becoming darker as decay progressed. Others were much speckled with the white

fungous growth, which, I am told, characterizes this singular disease.

2. I planted about half an acre in a piece of new ground, partly the site of several tobacco plant beds a few years ago. This land was well ploughed, and kept in good till and in a very light, friable condition the summer through. The potatoes were planted as above, and yielded well, though nothing like the other, either in quality or size of tuber; but the quantity of the crop was equally bad. The whole was gathered about the 10th of November.

I have been informed that a gentleman in Charlottesville, who made an extraordinary crop after the first plan I have mentioned, lost the whole in about two weeks by rot. His were gathered before frost.

Having heard that when diseased they would keep better out of the ground, I covered mine with straw in a tobacco house, and hope to preserve enough for seed and family use. The defective ones I have, from time to time, picked out and boiled for hogs, with no injurious effect that I could perceive.

The soil was in both instances the warm, dark colored, gravelly clay loam of a mountain hollow, well exposed to the sun.

FRANK: G. RUFFIN.

Shadwell, Allemarle, Jan. 13, 1848.

POWHATAN AGRICULTURAL CLUB.

The annexed proceedings of the Powhatan Agricultural Club are of a character to commend them to the favor of all who sympathize in their belief in "the importance to the agricultural interest, of building up a State Agricultural Society." They have shown their faith by their works, in transmitting to the Treasurer the amount necessary to constitute nine of their number members of the State Society—the other three having previously become members. The appeal they address to other similar Clubs it is hoped will meet with a responsive action corresponding to the bright and encouraging example it is now our privilege to commend to their emulation, and that the fruit may speedily appear in a large accession to the list of members, and in the presence, at the general meeting of the State Society to be held on the 10th of March next, of a numerous delegation from such associations:

At a meeting of the Powhatan Agricultural Club, held on the 7th of February, 1853, it was unanimously

Resolved, That the members of this Club, deeply impressed with the importance to the agricultural interest of building up a State Agricultural Society, will forthwith and indi-

vidually become members of the State Society, and pledge themselves to use their individual efforts to procure members for the same.

Resolved, That the Secretary of this Club be instructed to correspond with other similar Clubs—inform them of the action of this Club, and appeal to them to unite with us in efforts to procure members to the State Agricultural Society.

Resolved, That, for the purpose of concerting some general system for the agricultural improvement of the State, the Clubs throughout the State be requested to send one or more delegates to the State Society, at its meeting to be held in the city of Richmond on the 10th day of March next.

PHILIP ST. GEORGE COCKE,
President Powhatan Agricultural Club.

We invite the attention of our readers to the advertisement of sale of Devon cattle, by W. P. & C. S. Wainwright, at Rhinebeck, Dutchess County, New York.

OSAGE ORANGE.

This being the season for planting hedges of this most valuable live fence, we again call attention to it. Plants may be obtained of Gen. William H. Richardson, at Richmond, whose advertisement will be found in the Planter.

MODE OF PLANTING.

"Dig a trench wide and deep enough to receive the plants, in single or double row, as the case may be, throwing away the subsoil, if poor, and filling in with surface earth of good quality, mixed with a little well rotted manure, unless the soil be rich. The distance and mode of setting the plants is 6 to 7 inches apart, in a single line. But where a very close hedge is required, as around a garden or orchard, it is best to set the plants in two rows, one foot apart, and the plants one foot apart in each row, than in one row opposite the vacancies in the other—thus:

* * * * *
* * * * *
For the exterior fencing of a farm the single row is believed to be quite sufficient.

Before setting the plants, cut off all the tops to within an inch of the surface, or ground mark, (indicated by the yellow color of the roots.) Set the plants by line, one hand holding them while another fills up the trench with finely pulverized earth. Or the plants may be set and then cut off even with the surface. When set, the earth should be just level with the tops when cut off.

Keep the plants clear of weeds during the first summer, and in the fall it is a good plan

to apply a dressing of half rotted chip or wood-pile manure, two or three inches deep along the line of plants."—(*Extract from Ohio Cultivator.*)

The hedge may be planted any time during this or the next month, but the sooner the better.

SALE OF GOOD STOCK.

Elsewhere will be found an advertisement of the sale of Mr. John Wilkinson at Mount Airy. Of his cows we know nothing, though we have no doubt, from his profession and locality, that they are good; and we understand that they have been selected according to the Guenon marks, which we believe in. But we have seen a specimen of his hogs at the residence of our estimable and public spirited friend, Ro. L. Wright, Esq. near Wheatland, Loudoun county. He gave sixty-five dollars for a sow which took the first prize at the Baltimore Fair in 1851, and high figures, though we forget them, for one or two others. The animals and their progeny we thought the finest we had ever seen. They are of the famous Dutchess County breed.

Mr. Wilkinson informs us that the pigs and prizes of one of these sows, "Old Pink," now six years old, have amounted in the past five years to \$1340.

CONSTITUTION OF THE HOLE AND CORNER CLUB OF ALBEMARLE.

We are occasionally written to for copies of the Constitution of our Club by subscribers who wish to form similar associations. To save the trouble of copying and to give the desired information in a more agreeable form we publish it below. We do not give it as a model, for likely enough it may be improved upon, but only as a specimen by which others may be guided.

PREAMBLE.

Among the causes which seem now to retard, in this section of the country, the improvement of agriculture, both as a science and as a source of profit, and which tend to render farming an irksome, instead of a pleasant occupation, we note the following as chief:

1. Careless and inaccurate experiments, of

which the results are either altogether unsatisfactory, or lead to erroneous opinions;

2. A slovenly and incomplete execution of farming operations, whereby fields, half ploughed and crops half tilled, fail to realize our expectations;

3. Insufficient and inmethodical attention to beasts of the plough and stock of all kinds;

4. A want of careful attention and accurate observation whereby wrong and hasty opinions are often formed;

5. The absence of combined exertion to improve our profession;

6. The want of a sufficiently free and social interchange of individual views and experience among farmers;

Wishing to remove these and all other obstacles to the improvement of our profession as far as we can, we have determined to associate ourselves into a neighborhood club, for the purpose of testing the theoretic branches of husbandry by more thorough and accurate experiments and observations, with a view of exciting a desire for, and determination to have, better preparation, tillage and general culture, by frequent neighborly visits and inspections of the condition of each others' farms; and with the hope, by a free and unrestrained exchange of our different views and opinions, of eliciting the truth, deriving mutual knowledge and improvement, and promoting social feeling and happiness. And as it seems meet and necessary when men unite for the attainment of a common object, that they adopt organic rules for the direction and government of their combined efforts, we do adopt the following as the basis of our organization;

CONSTITUTION.

Article 1. We will call our association "The Albemarle Hole and Corner Club, No. 1."

Art. 2. The officers of the Club shall consist of a President, Vice President, Recording Secretary, Corresponding Secretary, and Treasurer.

Art. 3. It shall be the duty of the President, and in his absence of the Vice President, to preside at all the meetings of the Club, to preserve order, to appoint all committees, and to call meetings of the Club whenever he may deem its interests require it.

Art. 4. The duty of the Recording Secretary shall be to keep a full and regular record in a bound book of the proceedings of the Club, subject to the inspection of any member of the Club, and he shall, at every meeting, read the minutes of the preceding meeting, with a view to the correction of the same and for the information of members.

Art. 5. It shall be the duty of the Corresponding Secretary to conduct all the correspondence of the Club, and to prepare for publication all parts of proceedings, reports of committees, &c. which the Club may order to be published. And he shall lay his correspondence before the Club when required to do so.

Art. 6. It shall be the duty of the Treasurer to receive and keep all the funds of the Club, to pay all the expenses which shall be ordered by it, and to keep a separate account, and make a report and exhibit of the same at the end of his term of office.

Art. 7. The officers of the Club shall continue in office one year from the date of their election, or until others are elected in their places. All elections shall be *viva voce*.

Art. 8. The Club shall consist of not more than twelve members, each the proprietor of a farm, and in case there shall be more than one person interested in the cultivation of a farm, he shall also be a member; and no farm situated more than twelve miles from the forks of the Rivanna river shall be embraced in the limits of the Club.

Art. 9. The Club may elect honorary members of the most distinguished agriculturists or scientific men of the vicinity, whose privilege it shall be to attend any of the meetings of the Club, assist in its deliberations and interchange with its members views and opinions on all subjects connected with the great interests of agriculture.

Art. 10. Membership shall be constituted by subscription to the rules of the Club—and may be dissolved by voluntary withdrawal, or by failing to attend three successive meetings, unless excused by sickness or absence from the neighborhood.

Art. 11. New members and honorary members shall be elected only by unanimous vote; but all other questions shall be decided by a majority, except so far as may affect the rules by which the Club is organized, to alter or amend which, a vote of two-thirds of the members shall be required.

Art. 12. The Club shall meet on Saturday on one of the Club farms, in regular succession, once in every three weeks, beginning on the second Saturday in March and ending on some Saturday in November, (except that one meeting shall be held in January,*) and every meeting shall designate the farm on which the next meeting shall be held.

Art. 13. The Club shall meet on the day and farm appointed at ten o'clock, A. M. and proceed to examine into and inspect all the operations in execution at the time, the condition of the farm, stock, horses, &c. the general mode of culture, rotation of crops, the subject of manures, and all other branches of husbandry, making such inquiries as may occur to them, and suggesting such improvements as they may think proper.

Art. 14. The Club shall dine with the owner of the farm on which the meeting is held, and after dinner they shall discuss in an orderly and temperate manner, by conversation, and not by speeches, such agricultural subjects as may have been selected for discussion or as

* Since abolished. Now no January meeting, and meetings appointed by lot at beginning of the year.

shall occur to them if none have been selected. No subject shall be introduced into the conversations of the Club, unless it be of kin to agriculture, and politics shall be especially excluded.

Art. 15. If the day appointed for the meeting of the Club be such as to prevent it, the meeting shall be held on the farm appointed, on the Saturday next succeeding.

Art. 16. At each meeting a subject shall be selected for discussion at the next meeting; and when the discussion shall have been finished any two members may call for a decision of it by a vote of the Club; in which case each member shall concisely give his opinions and the reasons therefor, in the order called on by the President; an abstract of which shall be recorded by the Secretary.

Art. 17. Any subject selected for experiment by the Club shall be tested by a committee of three members, who shall make it in a fair and impartial manner, and shall report separately all the facts and circumstances which may attend it. Any member may suggest a subject for experiment, and as often as the Club may deem it expedient a committee of three shall be appointed to suggest experiments. This being the most important object of the Club, it shall be imperative on the members appointed to make an experiment, to do so with care and attention, and to embrace in their reports all the circumstances and important features of the experiment, and all such facts developed in its progress as may conduce to accurate conclusions.

A copy: Teste, F. E. G. CARR, R. S.

Having written to Mr. Wilkinson for his views on the preservation and application of yard manures, he, being very busy in making his arrangements to give up his school, devolved the task on G. T. Hammond, one of his pupils, a young gentleman of 16, who has, as will be seen by the reader, executed it in quite a creditable manner.

For the Southern Planter.

THE PRESERVATION AND APPLICATION OF YARD MANURES.

Mr. Editor,—Prof. Wilkinson, my worthy preceptor, has just handed me your letter, in which you desire his "views on the preservation and application of Yard manures," which he says, on account of his onerous and manifold duties, he cannot possibly attend to at present, and has therefore, much to my surprise, bade me respond to it as best I can.

I have, after some hesitation, consented to attempt to embody in the following, such ideas on this important subject as I have gathered from the lectures and writings of my esteemed

tutor, and from such authors as he has recommended to me, in connection with my experience derived from a farm practice of only one short year.

The prevailing practice throughout the country in the North is to allow all the manure to lie exposed to the rain and sun, with running streams in the lowest part of the enclosure—three most efficient mediums of dissipating its most valuable ingredients—and from what I have heard on the system practised in the South, it is no better there—in fact I am induced to think that it is, if possible, worse.

I have heard Prof. W. say, repeatedly, that he was satisfied that the beneficial effects of Yard manure made from the haulm of the cereal crops, the excrement of the domestic animals of the farm, etc. was not one-tenth of what it would be if properly preserved and applied.

Now the question arises, what would be the most judicious mode of preservation and application? This would of course, like most other practical operations of the farm, be controlled or modified by a variety of local circumstances—such as the pecuniary ability of the farmer, the fertility of the soil, the price of products, labor, &c. the character of the climate, and perhaps others that I am not acquainted with.

Taking each in order I would consider the farmer burdened with debt to the degree that he could scarcely meet the annual interest on his bonds, and the bills for the absolute necessities of his family, quite excusable for some degree of neglect in this most important branch of husbandry; though perhaps, even under such pecuniary embarrassment some would say there was no means by which he could sooner extricate himself; but I know full well, to say the least of it, "that his row is a hard one."

In the case of a soil naturally such as to produce full crops without the return of their waste or offal, we can excuse what might justly, under other circumstances, be considered a wilful waste. But such cases are only found in rich alluvial districts, the prairies, and the like—they are certainly very rare in the old states, where the high price of land, heavy taxes, and generally worn out fields, have become proverbial. It is in these that the necessity of renovation calls imperatively on the farmer to husband every means; but, alas! how little is the call heeded—how sluggish like do farmers generally plod on.

But I am proud to say, that there are a few honorable and very creditable exceptions—among whom I know of no one who has so effectually applied the deductions of scientific investigations as my preceptor, not only in husbanding and applying the materials of fertilization, but in almost every branch of farming.

He tells us that cattle, or live stock, can be kept most economically in stables or sheds—that even sheep, of which he has kept large

flocks, do much best in yards with shelter from storms, and where they cannot graze any during the foddering season—that all such sheds and stables should always be kept well littered with the haulm of the crops, and in the absence of a sufficiency of this material, that leaves, sea weed, saw dust, dried peat, and even spent tan bark may all be used with advantage as absorbents of the liquid, the most valuable portion of animal excrement—that manure thus made should never be exposed to the dissipating influences of the sun and rain, that manure vaults directly under the animals are most economical and efficient; that fine, dry charcoal and small quantities of ground gypsum should be frequently applied to the hosed manure heaps, and that all fermentation and decomposition in manure before it is incorporated with the soil should be avoided as much as possible, as it is always attended with waste, which is effectually prevented when the decomposition takes place in the soil, as the volatile particles are absorbed by the soil and retained therein until appropriated by the growing crop.

He contends that by applying all the yard manure to the soil in a long or decomposed state, and turning it in with the first tillage for a rotation of crops, the decomposition of the manure is such as to supply from time to time the amount of nourishment needed in the different stages of the successive crops to be produced, more in accordance with the wants of the crops than can be effected by any other system, and also that the waste or dissipation of that invaluable substance that defies science to confine it, and yet allow its free generation by exposed decomposition, is in no way so effectually prevented.

What is more he practises what he preaches, and the results are, crops that surprise all who see them growing, and disappoint all his competitors at the agricultural fairs.

There are, however, circumstances when barn yard manure preserved and applied as above recommended, without other than ordinary manipulation in preparing it, would be unfit for the crops: *e. g.* in the culture of roots every year on the same land—(carrots, beets, parsnips, and the like,) when the land is naturally rather dry, the long, undecomposed manure could not be supplied in sufficient quantities to be sufficient for the crops without producing injurious mechanical effects, that is, by increasing the porosity of the soil and exposing it to the destructive effects of drought—this we avoid by chopping all, or the greater part of the stalks and straw used for litter, as well as for feeding; which admits of spreading it more suently, and incorporating it more thoroughly with the soil, hence avoiding the difficulty above alluded to.

Many of your readers may say that it would be entirely too expensive to prepare stalks and straw for litter by cutting—but it is not so much so as one might imagine.

We cut at the rate of 80 bushels per hour

with one horse power, hence, you perceive the stalks and straw of a large crop is reduced to the fine state in a few days.

It is more convenient for litter, and full two thirds of the labor of forking the manure into the carts and spreading it on to the fields is saved by having it short; besides the great advantage arising from having it spread uniformly.

Prof. W. also tells us, that it is important to have the manure of all the domestic animals mingled; that the deficit in one is supplied by another; that the tendency to rapid fermentation in that from the horse stable is modified by that from the cows, and that from the sty and henery is rendered safer for applying in contact with the seed, the germ of which is often destroyed by the burning caustic character of these manures. He has recently planned a suite of farm buildings for a gentleman in Massachusetts who has a farm of nearly 300 acres, and in this plan he has provided for all this, by arranging the stables, styes and henery all on one floor, over a large manure cellar, into which the manure falls through trap doors.

The dimensions of this barn are 200 ft. long, 40 ft. wide, and 46 ft. high, from the road or drive way in the manure cellar to the peak—it is to be three stories high, with a cart-way the whole length of every floor. It is to stand on a fish pond dam 24 ft. high—and there is to be a 24 ft. diameter water wheel in the cellar for grinding feed, threshing, cider making, wood sawing, &c.

There are to be stables for 50 head of cattle, 6 horses, 50 to 100 swine, 300 sheep, and 500 dunghill fowls.

I should like very much to see a plate and description of these buildings in your paper, and I am confident that your readers would derive much valuable information on the subject of farm buildings, also, on the preservation of manure, and the most economical food for and mode of keeping stock. I am aware that farm buildings like the above described, which will cost, with appurtenances, about \$7000, are much beyond the means of the common farmer; but it does not follow, that none of its arrangements can be modified to meet the necessities of the mass, which I believe they may be, and that too to infinite advantage.

In your State and further South, a mere covered enclosure for the provender, live stock and manure, I believe, is all that is necessary. This may be effected with comparatively little expense, and I am of opinion that Prof. W's. plan for preserving yard manure, in the essay accompanying his "premium plan of Barns," published in the American Farmer, is the best adapted for general use in the South of any other.

It is to have in the yard where the cattle are kept, or near the stable, (which would be much preferable), a shed for the manure, made by setting two rows of round posts in the ground,

laying upon these, plates, on which to rest the feet of the rafters, the tops of which are mitred together and nailed both ways, on these he recommends to put a roof of straw thatch. It is not to be enclosed on any side; this admits of moving the manure from the shed without inconvenience.

He says that the excrement, litter from the stables, and all refuse vegetable matter not needed for feeding or litter should be deposited under this shed, in which it will be protected from waste, and the weight to be carted out will be from 70 to 90 per cent. less in the form of rain water than would be the case if exposed as is usual.

I remain your ob't serv't,

GEORGE TILLINGHAST HAMMOND.

Mount Airy Institute, near Germantown, Pa.
Feb. 1st, 1853.

POTATO ROT.

Some time last year we saw it stated in "The Plough, Loom and Anvil," that this destructive disease might be avoided by covering the land and seed with leaves or straw. At the time we sought but could not find an article embodying our own adverse experience in 1847. Having since found it and decided to publish it for another purpose in this number, we call the attention of northern papers to the facts it presents.

For the Southern Planter.

ONE IDEA ON SEED CORN.

Mr. Editor,—Observation, satisfactory to myself, leads me to the belief that the prolific quality of corn depends in a very great measure upon the thickness of the crop from which the seed is taken. All farmers know if corn be planted close the number and size of the ears are lessened; while if greater distance be given, the plant bears large, and in many cases double ears. My idea is, if corn be crowded for a succession of years, it will, if I may so express myself, *acquire the habit of producing lightly*, which property it will not lose for several years, even under a different cultivation. Take seed from a crop which has been thus crowded and plant at any distance you please and you will have some stalks without ears, and many with but one small one. I have found the most prolific double-eared corn, after several years close planting, lose its prolific character and yield but one ear to the stalk. I think, therefore, every farmer should plant a portion of his crop thin expressly for seed, and from this select the larger of the double ears for planting. Seed, thus selected, may

be planted much closer than that commonly used.

I hope, Mr. Editor, some of your corn planting readers will test the truth of this theory, and report their experiments to the Planter. My own opinion is, that it is strictly true, and by acting upon it any of us "can make two ears of corn to grow where but one grew before."

Very truly yours,

R. W. N. NOLAND.

Albemarle county, Va.

We had noticed the deficient fruitfulness of thick planted corn that our correspondent speaks of, but had never the wit to suggest a remedy. We hope our friends will try the thing for themselves. It can be tried in a pumpkin patch without loss or trouble; and the land appropriated to pumpkins can be made to grow the seed corn.—Ed. So. Pl.

AGENCY FOR THE PURCHASE OF STOCK.—See the advertisement of Mr. Goldsborough. We have no acquaintance with him ourselves, but his list of referees includes some gentlemen of high character. We mean to give him a trial.

PEACH TREES

"Peach trees should be carefully examined about the roots at this time, and a sharp knife used to clear away all gum, grubs and dead bark. Wash with soft soap and soot, and draw the earth up around the tree in a small hillock."

The above is from one of our exchanges, the Ohio Farmer.

We object to using a sharp knife about the roots of the peach tree. Knives do more hurt than good. Place something around the tree to exclude the borer and you save it; but cutting and hacking the bark of the tree to find the borer is worse than scratching after a flea bite.

Peach trees will not bear wounds on the limbs. Small twigs may be cut, such as will heal in one summer—but larger wounds should never be made.

Wood ashes placed around the trunks in May, *annually*, will keep the borers away. It is said that herbs of various kinds, offensive to the fly that deposits the borer, will answer the same purpose.—Tanzy is said to be effectual when placed about the trunks. We recommend preventives in preference to cures.—*Massachusetts Ploughman*.

From the New England Farmer.

MR. FRENCH'S ADDRESS.

We have been favored with a perusal, in manuscript, of an address delivered by our Associate Editor, Mr. French, before the York County Agricultural Society, at Saco, Maine, in October last.

Under his description of "the peculiar position which Woman occupies in New England Society," we make an extract, and under that of "Washing Day," another, being all we can find room for at present. We have no hesitation in saying that the address is one of the three best we have ever seen. When the reader has perused the extracts below, he will be glad to see more of it.

Look, for a moment, at the condition of a majority of the wives of respectable farmers, ay, and of men of all other classes in your own county. What are the duties, which, by general consent, devolve upon them?

What do *you*, sir, and *you*, expect of the lady who presides over your household? Did you ever consider for a moment, how many and various and constant are her cares and trials?

You are, perhaps, an amateur farmer; you have, like a true and thriving Yankee, built a large and elegant house—not so much because you need it, as because your neighbors live in fine houses. And, besides, you are a growing man in the world, and have been representative to the Legislature, and are *liable* to go to Congress, or be President of the United States. There is no knowing what may not befall you, and it is well to keep up appearances in the world, and be ready for any honors that may be thrust upon you.

You have a large family of children, and they are all to be educated, and of course have no time to *work*. Your boys must be fitted for college, and your girls must be taught music, and French, and drawing, besides the common branches of learning. Your wife is expected to see that your elegant house and furniture are kept in order—that the children are kept neat and orderly, at all times. You have a fancy for Devon and Ayrshire and Short-horn cows, and perhaps exhibit them at the Annual Fair, and your wife must take interest enough in your affairs to look well to the dairy.

You have a great propensity to clear up swamps, and build stone walls, and improve your farm, and your kitchen is filled with

hired men, and nobody but your wife knows what to get for breakfast, dinner or supper for them or the family.

Then you are a generous, hospitable sort of fellow, and often invite your friends from other towns, whom you happen to meet, home to dine, and your wife is relied on, to do the thing up handsomely, for the credit of the establishment; and, although the three youngest children have just had the whooping-cough, and have kept her awake half the nights for the last month, the amiable lady is expected to appear at the table, dressed like the wife of a gentleman, as bland as a moonbeam, and play the agreeable to your guests, with the same matronly grace, as if she had passed the whole morning over her books and music.

You expect to see your breakfast upon the table punctually at the hour, and the children washed and neatly dressed in their places, at the table. You expect to see the table handsomely laid, and the food properly cooked and served up. You expect the good lady to be ready and at leisure, at all times, morning and evening, to receive calls of friendship or ceremony, and especially those of your own friends.

You expect to find your wardrobe always in perfect order, with no button or loop or string missing. If a child is ill, there is nobody but the mother to watch over it by night or by day, and the depressing, never-ceasing solicitude, and exhausting offices due from a mother to her *infant*, can be delegated to no other.

In short, sir, you expect your wife to be at the same time cook and chambermaid, lady and serving girl, nurse and sempstress and governess, laundress and dairymaid.

At length, you see, with a sad heart, that her eye is losing its lustre—that her form is becoming daily more frail—that the elasticity of her spirits is gone, and at last the thought, the sickening, crushing thought, is forced upon you, that she, whose *youthful* image, radiant with health and happiness, has never passed from your heart—she, who alone has remained to you true and constant, through sickness and health, in trials and prosperity—she, the mother of your children, who has so long been about you and your pleasant household, like a good angel, doing all kind offices for you and your loved ones—she who is more to you than all the world beside—*may die*.

And now, perhaps, an effort is made to relieve her, and changes are effected in the household arrangements—and house-

keepers and servants are procured; the daughters are called on to aid in the domestic affairs, and the grand schemes of improvement are suspended and no company is invited. But it is all in vain. The hectic flush is on her cheek, and sorrow and fearful forebodings sadden every heart.

For a time, almost like a pure spirit from the realms of bliss, she glides about from room to room, still watchful for the comfort of others, and forgetful of self.

But, I will not attempt to fill up the picture, and trace the sure decay of strength and beauty and life by slow consumption. At length "*there is rest in Heaven.*"

Have I exaggerated the trials of a New England wife? I wish it were true that no one of us could call to mind an original from which my picture might have been drawn! I wish it were true that no one of us were conscious of past thoughtlessness, or unreasonable exactions, by which an undue portion of life's burdens have been cast upon the sex least able to bear them.

* * * * *

Washing day is a day in the calendar to be remembered—a day when woman reigns supreme—*rains* in more senses than one—a day which furnishes an excuse for *cold coffee*, and a *picked up dinner*—a day when every woman claims a's part of her prerogative, to wear her hair in papers and scold, and even "kick the wee stools o'er the mickle," if she feels in the humor—a day when the goodman of the house is brought fully to appreciate his own littleness, to feel that he is but as a grasshopper in the sight of any woman, armed with a mop or water pail.

And this noted and justly celebrated day comprises *one-seventh* of a man's life, and he who has reached his *grand climacteric* has lived through *nine whole years* of washing-days, a consideration as terrific to the young householder, as it is consolatory to those in old age, who believe that the trials of this world are to be deducted from the discipline of the next.

From the importance of this subject, involving, as it does, *one-seventh* of all our earthly happiness, one would suppose that philosophers and statesmen, laying aside their other schemes for the amelioration of man's condition, would have devoted themselves exclusively to the abolition or mitigation of washing days.

"But the world has gone on," as Dickens has remarked, "and revolved round the sun, and turned on its own axis, and had

lunar influences, and various games of that sort," and washing days have come and gone, and the human race has rather increased than lessened in numbers, and men have settled down upon the idea, that the trials of that dreadful day, like the existence of sin on earth, are to be reckoned among the inscrutable dispensations of Providence, to be patiently endured, with such courage as we can put on for the occasion.

To be sure, like old father Adam, in the garden, men are prone to charge this evil, like all others, upon the *woman*, and I propose, by way of illustrating my subject, to bring the question directly before the appointed tribunal, whether the worst trials of washing day, like most others of domestic life, are not fairly chargeable upon the want of proper attention and foresight on the part of the *men*.

And I charge upon our prisoner, in the first place, that he and the large class whom he fitly represents, have not made suitable arrangements for the convenient supply of the two essentials of housekeeping—*wood and water*.

Your *wood-house*, sir, is not near enough to your *kitchen*. Your wife is obliged to go out of doors in summer and winter, to reach it—perhaps to go down a flight of steps, and bring her wood up. Often she finds no dry fuel of suitable kind cut and split for use, and you would be ashamed to have it known, how many times she has taken the axe into her own hands to make up for your negligence.

And then the *water*—we have all seen it again and again, and you cannot deny it. Instead of having a cistern of soft water, with a pump in your wash-room, or an aqueduct leading into your house, you have, year after year, depended on a well of hard water, *five rods* off, with a well post that leans hard to the east, and a sweep loaded with old *cart boxes* at one end, and a crooked pole and leaky bucket at the other, and the girl whom you took young and blooming from her home, and vowed to love and cherish, goes there, day after day, and year after year, and draws water for her household!

And, again, what sort of a *washboiler* does she use? Is it nicely set in brick-work, in a convenient place for use, or does she hang a big kettle on the crane, half the length of the house from her wash bench, or is she, for want of a better, compelled to use a half-sized tin boiler on the cook stove in dog days?

And where is her *clothes line*? Have you provided, in some sunny spot, sheltered from the winds, one of the rotary frames lately introduced, on which the whole wash may be hung by a woman in a few moments without moving her basket, or have you some convenient out-building, where the line may be kept always stretched, without being slackened by the weather?

No such thing, sir. In the first place, the line is not half long enough, for you never have returned the piece you borrowed to tie up your broken wagon shaft, and you never paid any attention to the oft-repeated, quiet suggestion, that things were not exactly convenient for drying the clothes, and so the females of your household, after working in a hot room over hot water, half the day, must *find a place* to dry their clothes as best they can. And we all know how it is done, for we see it every Monday of our lives.

The line is first tied to the old *well post*. It is then carried to a *post in the garden fence*; next, a long stretch is made to the *old sweet apple tree*, and a turn taken round one of its principal limbs—then round the latch of the wood-house door, and lastly, back to the *well post*, forming an irregular parallelogram, with the longest sides supported by the long-handled pitchfork and the rake, borrowed from the barn for the occasion!

And now, what says the accused to our charges? It will avail nothing to set up *poverty* in his defence, for as has been truly said, "no man is so poor as to be obliged to have his pigs-trough at the front door," and we may add, no man is too poor to split his own firewood, and bring the water to wash with.

And so he may as well plead guilty, and save our jury the trouble of a verdict. And henceforth, we will charge a fair proportion of the trials of washing day upon the neglect to provide the best possible conveniences for performing what is at best a disagreeable office in housekeeping.

I have ventured upon this mode of illustrating what I deem, after all, a subject of serious interest—the *busy and care-worn life of New England matrons*.

These burdens which bear so heavily upon the wives of our farmers as to constitute a great objection to the choice of agriculture as a business, with any considerable man, result, as we have seen, in part from the want of *servants* or reliable help. This difficulty arises legitimately

from the principles of equality, inherent in the constitution of our government, and which we should not seek to change.

But this is by no means the whole secret of the trouble. Much of it results from causes which lie within our own control, to some of which allusion has already been made, and others may readily be named.

PAYMENTS TO THE SOUTHERN PLANTER,

From February 1st to March 1st, 1853.

All persons who have made payments early enough to be entered, and whose names do not appear in the following receipt list, are requested to give immediate notice of the omission, in order that the correction may be made in the next issue:	
Andrew L. Mills to January 1853	\$1 00
B. J. Barbour to January 1854	1 00
E. H. Osborne to January 1854	1 00
Dr. J. H. Ellerson to January 1854	1 00
John Trent to January 1854	
John H. Coleman to January 1854	
Wm. C. Kunely to January 1854	
John S. Adams to January 1854	5 00
Jonas Meadow to January 1854	
Nelson Talley to January 1854	
Col. Cary C. Cocke to September 1853	1 00
Mr. Wade to January 1854	1 00
G. H. Burwell to January 1854	1 00
Wm. Patrick to July 1853	1 00
Charles A. Patrick to January 1854	1 00
Col. C. B. Killebrew to January 1854	1 00
Dr. W. L. Wight to January 1854	2 00
Dr. James H. Latane to January 1854	1 00
Edmund Ruffin to January 1854	1 00
John Winfield to January 1853	4 00
Robert Stringfellow to January 1854	1 00
Capt. Arthur Slaughter to January 1854	1 00
H. T. Kidd to January 1854	1 00
Dr. Thomas Johnson to January 1854	1 00
Dr. Paul J. Carrington to January 1854	1 00
Edwin N. Palmer to January 1854	1 00
Hartwell Chandler to January 1854	1 00
Thomas Cooke to January 1854	1 00
Richard Rouzee to January 1854	2 00
Hilary Harris to January 1854	1 00
Edmund Goode to January 1854	1 00
B. W. Leigh to January 1854	1 00
Wm. H. Whiting to January 1854	1 00
A. D. Martin to January 1854	1 00
B. H. Dawson to January 1854	1 00
A. J. Richardson to January 1854	1 00
B. C. Drew to January 1854	1 00
H. M. Harlow to June 1853	1 00
Jesse Whitehead to January 1854	1 00
Richard B. Lyne to January 1854	2 00
George Campbell to January 1855	2 00
Francis Staples to January 1854	1 00
Capt. Thomas Lang to January 1856	1 00
Dr. R. A. Urquhart to January 1854	5 00
A. B. Urquhart to January 1854	5 00
L. J. Bowden to January 1854	1 00

Hill Carter to January 1854	\$3 00	James Ferguson to January 1854	\$1 00	
Martin Tutwiler to July 1853	1 00	James R. Sterrett to January 1854	1 00	
Thomas Wilson to June 1853	1 00	J. Duke to July 1853	1 00	
James Whitehead to January 1854	1 00	J. C. Dickinson to January 1854	1 00	
Clement R. Morton to March 1854	1 00	Francis R. Hooff to July 1853	1 00	
Frederick Butler to January 1854	1 00	Stephen A. Norfleet to January 1855	3 00	
Major R. H. Allen to January 1854	1 00	Ed. P. Chamberlayne to January 1854	1 00	
Dr. Thos. H. Venable to January 1851	2 00	B. B. Wilkes to January 1854	1 00	
John A. Selden, Sr. to January 1854	4 00	James Galt to January 1854	6 00	
John A. Selden, Jr. to January 1854	1 00	Estate of Wm. Galt to January 1853	2 00	
Capt. Thos. L. Hines to January 1854	1 00	John Hart, Sr. to January 1854	1 00	
Maj. Edwin J. Redd to January 1854	1 00	Dr. Watson to January 1854	2 00	
A. A. Ashby to January 1854	1 00	Col. D. B. Hancock to January 1854	1 00	
Col. R. W. Carter to January 1854	2 00	Dr. W. T. Thompson to July 1853	1 00	
Thomas Paramore to January 1854	1 00	Dr. S. A. Hart to January 1854	1 00	
Dr. H. Field to March 1854	1 00	James M. Trevillian to October 1853	1 00	
T. B. Robertson to January 1854	1 00	Rev. James Fife to January 1854	1 00	
Robert N. Kelso to January 1854	1 00	H. Minor to October 1853	1 00	
Miles Selden to January 1854	7 00	Frederick Roberts to September 1853	1 00	
Thos. R. Joynes (omitted) to July 1852	4 00	Philip Edge to July 1853	1 00	
Thos. L. Pleasants to January 1854	2 00	Dabney Minor to September 1853	1 00	
Fred. W. Smith to January 1854	1 00	B. Wood to July 1853	2 00	
Richard F. Darnell to January 1854	8 00	Henry B. Jones to January 1854	} 10 00	
Dr. Wm. L. Graham to July 1853	1 50	George W. Houston to January 1854		
C. B. Williams to January 1854	1 00	J. J. M'Bride to January 1854		
Bolling Jones to January 1854	1 00	J. W. Culton to January 1854		
Jacob Graves to January 1854	2 00	Major J. Brooks to January 1854		
W. M. Ambler to January 1854	7 00	Samuel Willson to January 1854		
Edward Porter to January 1854	1 00	Zachariah Johnston to January 1854		
J. R. Jones to March 1854	1 00	James C. Willson to January 1854		
E. A. Morrison to January 1854	1 00	Dr. Wm. M. Gold to January 1854		
Hugh M. Nelson to January 1854	2 00	P. Trotter to January 1854		
B. Boykin to January 1854	} 4 16	D. Brown to January 1854		
T. Whitaker to January 1854			T. H. Walker to January 1854	
W. A. Ancrum to January 1854			M. Buchanan to January 1854	
John Workman to January 1854			Capt. J. J. M'Nitt to January 1854	
John Desaussure to January 1854			W. B. Slaughter to June 1853	1 00
J. W. Brockwell to January 1854		1 00	E. Brumhall to July 1853	3 00
Robert Robinson to January 1854		1 00	Thos. W. L. Faunteroy to Jan. 1854	2 00
Capt. Thomas F. Spencer to Jan. 1854		1 00	Dr. John R. Garnett to January 1854	1 00
John H. Arnold to January 1854		1 00	Robert A. Calvert to January 1854	1 00
Peter G. Ellett to January 1854		2 00	Frederick P. Brauner to January 1854	1 00
Wm. P. Scott to January 1854	1 00	Wm. M. Harrison to January 1854	1 00	
Jos. K. Anderson to January 1854	1 00	Andrew B. Irick to July 1853	1 00	
Luke Woodward to September 1853	2 00	George Rogers to January 1854	1 00	
Jefferson Spindle to January 1854	1 00	W. O. Goode to January 1854	1 00	
Edward Waller to January 1854	1 00	Wilson Winsfrey to January 1854	1 00	
Dr. Hawkins Stone to January 1854	1 00	George N. N. Porter to March 1854	1 00	
R. H. Lorton to January 1854	1 00	Wm. H. Goodwin to January 1854	1 00	
James W. Logan to January 1854	7 00	George Williams to July 1854	1 00	
Capt. E. Turner to January 1854	1 00	Wm. T. Mason to January 1854	1 00	
A. J. Kohn to September 1853	1 00	James M. Johns to January 1854	1 00	
George B. A. M'Carty to January 1854	1 00	Daniel Ammen to January 1854	1 00	
Robert Healy to January 1856	5 00	Rev. Geo. T. Wilmer to January 1854	1 00	
W. D. Norvell to January 1854	1 00	W. H. Roy to January 1853	1 00	
Mrs. Mary T. Moseley to January 1854	1 00	Dr. H. W. Tabb to January 1854	1 00	
Col. Ed. Shelton to January 1854	1 00	W. C. Lipscomb to January 1851	4 00	
W. D. Mansfield to January 1854	1 00	Milton Kirtley to January 1854	1 00	
Dr. S. S. Henley to January 1854	2 00	Temple Walker to January 1854	1 00	
Rev. Samuel Taylor to January 1854	1 00	John B. Downman to January 1854	1 00	
Wm. B. Harrison to January 1854	1 00	P. C. Smith to June 1853	1 00	
Wm. F. Blackwell to January 1854	1 00	D. X. Branch to January 1848	1 00	
Dr. W. H. Twyman to July 1853	1 00	George E. Naff to January 1854	1 00	
George A. Smith to January 1854	7 00	David Turner to January 1854	1 00	
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Wm. H. Nicholson to January 1854	1 00	Chas. Brock to January 1854	3 00	
Gen. O. G. Clay to January 1854	3 00	Wm. Cowherd to January 1854	1 00	

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Wm. Smith to January 1854	1 00
D. S. M. Crump to January 1854	1 00
Dr. L. C. Crump to January 1854	1 00
James Dickinson to January 1854	1 00
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H. F. Woodhouse to January 1854	1 00
Joseph H. James to January 1854	1 00
Wm. G. Overton to January 1854	1 00
Williamson Talley to January 1854	1 00
M. Wilson to January 1853	5 00
Wm. C. Rives to January 1850	5 00
J. A. Watson to January 1854	1 00
Richard V. Watkins to July 1854	1 00
R. B. Hendrick to January 1854	1 00
A. K. Shepatd to January 1854	2 00
John S. Skyrin to January 1854	2 00
Wm. Y. Downman to January 1854	2 50
W. L. Figgatt to June 1853	1 00
Thomas M'Corckle to June 1853	1 00
Major T. J. Jackson to June 1853	1 00
Thos. L. Preston, Jr. to January 1854	1 00

IMPROVED SHORT-HORN (Durham) CATTLE FOR SALE.

CALVES, three-fourths or seven-eighths blood, of this stock, may be bought of me at \$15, if taken at weaning time. If a male is wanted, it will be necessary to engage him in advance.

Good cows, with young calves of like blood, not weaned, may now be bought, for prices varying from \$55 to \$65, for each cow with her calf.

My cattle are descended from Berry, imported by Edwin G. Booth, esq. of Nottoway, and bought for him by the Rev. Henry Berry. This gentleman, esteemed one of the best judges and breeders of cattle in England, selected this as the best calf he knew, and of the best family of "Improved Short-Horns." (Mr. Berry's letter containing that statement was published in the Farmers' Register, vol. V, page 363.) Some years after, I and others bought the bull for \$400. My present bull is by Berry, and from a cow also of the same pure blood, but of different descent from the original English stock of "Improved Short-Horns." EDMUND RUFFIN,
Marlbourn, (near Old Church P. O.) mar—2t

THOROUGH-BRED DEVONS for Sale by W. P. & C. S. WAINWRIGHT.

BULLS.—1. *Uncas*:—calved March 19th, 1851.—1st prize as yearling at American Institute show in October, 1852. Sire, "Megunticook;" grandsire, "Prince Albert" (102); dam, "Nonpareille," by "Lord Lynedock."

2. *Red-jacket*:—calved May 5th, 1852.—1st prize as calf at American Institute show 1852. Sire, "Megunticook;" dam, "Meadow Lilly," by "Baronet" (6); g. d. "Helena."

3. *Osceola*:—calved Sept. 11th, 1852.—Sire, "May-boy" (71); grandsire, "Duke of York" (37); dam, "Moss-rose," by "Duke of York," (37); g. d. "Nonpareille."

4. *Dacotah*:—calved October 29th, 1852.—Sire, "May-boy" (71); dam, "Red-bud," by "Megunticook;" g. dam, "Nonpareille," by "Lord Lynedock."

HEIFERS.—1. *Rose*:—calved Oct'r, 1849; bred by Mr. R. C. Gapper, Canada West.—Sire, "Major;" g. sire, "Billy;" dam, "Cherry," by "Billy;" g. d. "Beauty." In calf by "May-boy."

2. *Gazelle*:—calved October, 1850; bred by Mr. R. C. Gapper, Canada West.—Sire, "Rob Roy;" grandsire, "Santa Anna;" dam, "Cherry." In calf by "May-boy," (71.)

These pedigrees run back to the best herds in England:—"Megunticook," "May-boy," and "Nonpareille," having been imported from the stock of George Turner, Esq., and "Helena," from that of James Quartly, Esq., by ourselves; while "Billy" and "Beauty" were imported by Mr. Gapper from that of Mr. James Davy.

Animals delivered free of expense in New York, or Albany. Our stock may be seen at all times on our farm, three hours from New York by Hudson River R. R.

The numbers in brackets refer to the English Herd Book.

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THE subscriber offers for sale the following varieties of *pure blooded Fowls*, viz: COCHIN CHINA OF CANTON FOWLS; BLACK, WHITE, BUFF AND BROWN SHANGHAI; CHITTAGONGS OF GRAY SHANGHAI.

The above are the largest and best variety of fowls bred in this country, and are from stock originally imported by the subscriber. Gentlemen, Poultry-keepers and others, desirous of procuring choice Poultry may depend upon the above stock being purely bred and warranted true to their name. Address

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The different varieties of these beautiful fowls may be seen at my residence on First Street, between Main and Cary Streets.

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Richmond, Nov. 1, 1852—1y

CLASSICAL AND MATHEMATICAL SCHOOL.

RUMFORD ACADEMY, KING WILLIAM, VA.—This school is about two miles from Sharon Church, on the stage road between Richmond and Tappahannock. So healthful is the location, that but few cases of serious sickness have occurred in the school since its establishment in 1804. No expense is spared in providing for the physical comforts of the pupils; treated in every respect as young gentlemen, they are required to conduct themselves as such.

The subscriber, who has been engaged eight years in guiding and instructing youth, will be aided by competent assistants.

The usual English Course, including Chemistry and Philosophy, an extensive course of Mathematics, and the Latin, Greek and French Languages will be taught. A recess of one week will be given at Easter.

TERMS.—For board and tuition, with every necessary except lights and stationery, from 15th of January to 1st of July, \$84; payable one-half 1st of May, the other half 1st of July.

JOHN H. PITTS,
Aylett's P. O. King William.

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STOCK Cattle of all the different breeds, Sheep, Swine, Poultry, &c. will be purchased to order, and carefully shipped to any part of the United States, for which a reasonable commission will be charged. Apply to

AARON CLEMENT, *Philadelphia.*

Refer to Gen. W. H. Richardson, Richmond, Virginia.

N. B.—All letters, post-paid, will be promptly attended to.

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THE subscriber having removed to the large Foundry, just erected by him and fitted out with machinery of the latest and most approved style, is, in addition to the manufacture of Tobacco Flattening Mills, prepared to receive orders for Stationary Steam Engines, Saw and Grist Mills, Agricultural Machines, Tobacco Presses of every description, and all kinds of Iron and Brass Castings. He pledges himself to execute faithfully, and with dispatch, all work entrusted to him, and respectfully solicits a call from his friends and the public generally.

The highest cash prices paid for old cast iron, brass and copper.

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THE subscriber offers for sale fine Ground and Calcined Plaster, both of the best and purest quality; he has also a Bone Mill attached, and intends to keep a supply of Ground Bones, fine and pure. Farmers and others are invited to call and examine for themselves. His prices shall be as low as the same quality articles can be bought for, North or South. The highest cash price will be paid for dry bones, delivered at his Mill adjoining the Paper Mill.

oc—tf

R. R. DUVAL.

DR. VALENTINE'S RECIPE FOR MAKING ARTIFICIAL GUANO.

- No. 1. Dry Peat,* - - - 20 bushels
- No. 2. Wood Ashes, - - - 3 bushels
- No. 3. Fine Bone Dust, - - - 3 bushels
- No. 4. Calcined Plaster, - - - 3 bushels
- No. 5. Nitrate of Soda, - - - 40 pounds
- No. 6. Sal Ammoniac, - - - 22 pounds
- No. 7. Carb Ammonia, - - - 11 pounds
- No. 8. Sulph: Sodæ, - - - 20 pounds
- No. 9. Sulph: Magnesia, - - - 10 pounds
- " 10. Common Salt, - - - 10 pounds

* If peat cannot be obtained, use garden mould, or clean virgin soil instead.

DIRECTIONS FOR MIXING.—Mix Nos. 1, 2, 3, together—mix Nos. 5, 6, 7, 8, 9, 10, in four or five pails of water, or enough to dissolve the ingredients. When dissolved, add the liquid to the mixture, (1, 2, 3,) and mix as in making mortar. When thoroughly mixed, add No. 4, (the calcined plaster,) which will absorb the liquid and bring the whole to a dry state. Mix under cover in a dry place—pack so as to exclude air—observe the proportions in making small or large quantities. The above receipt will make one ton, which will manure seven and a half acres of land.

Having furnished the above to a number of farmers who have tested its qualities—many thinking it equal to natural guano—the subscribers have made arrangements to furnish any quantity during this season, and will sell the ingredients exclusive of the Peat, Wood Ashes, Plaster and Salt, (articles on every farm,) at the low price of \$10 per ton. One sugar hogshead will hold ingredients enough for five tons. All orders will be carefully and promptly executed, and sent to any part of the State.

R. R. DUVAL & BRO.

Chemists and Druggists, under the American Hotel, Richmond, Va.

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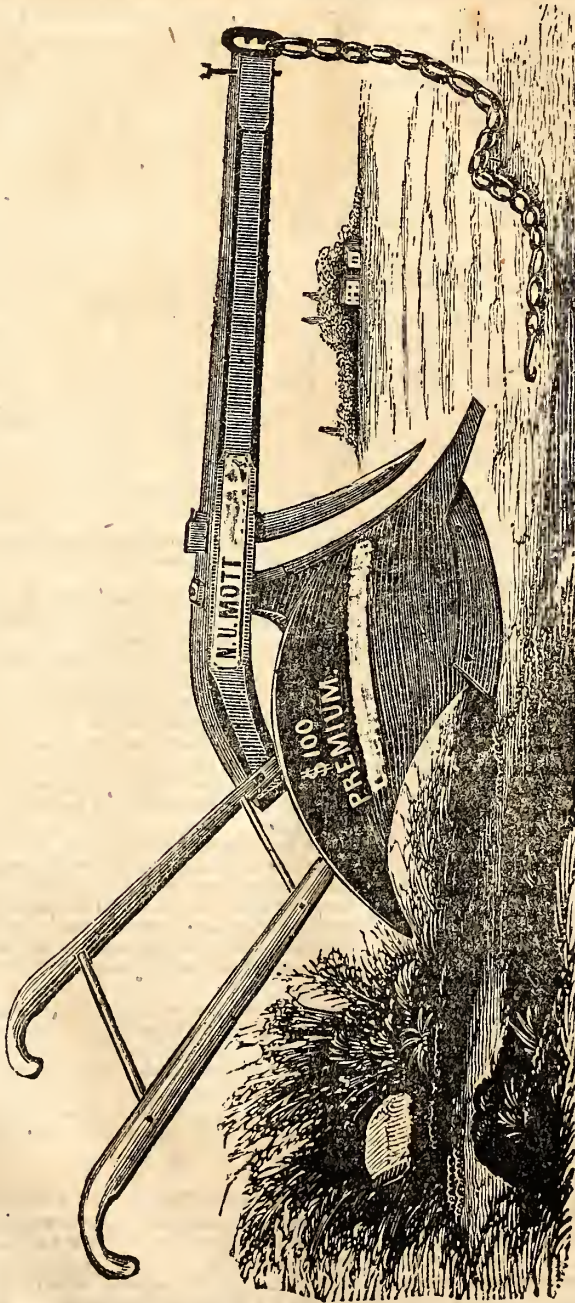
OSAGE ORANGE PLANTS FOR LIVE FENCES,

THE best and most durable enclosure for farms, gardens or lots. I have some of these plants for sale—\$1 per hundred—and would be glad if those who want them would inform me as soon as convenient.

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WM. H. RICHARDSON.

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N. U. MOTT, WILLIAM LEWIS and AUGUSTINE CRUMP have entered into copartnership for the purpose of manufacturing all kinds of the most approved Agricultural Implements suitable for the South and West, and have purchased of Mr. J. S. WALTHALL his stock, and taken his old stand, where they will be happy to serve the patrons of the old concern and the public in general, and take this method of calling the attention of all interested in tilling the soil to their extensive stock of superior agricultural implements. They will manufacture and keep for sale Ploughs and Plough Castings of all kinds and of the best materials; also Mott's Horse-Powers and Threshing Machines, with or without Cleaner and Separator. These Machines have taken the preference wherever introduced, and are recommended by some of the best farmers in Virginia, Maryland and Pennsylvania, as the best and most durable and least complicated of any yet introduced—are of easy draught and easily kept in order by the farmer at small cost. This Machine must become the principal, if not the only Machine in use, as it will thresh, clean and bag up at

one operation—being simple in construction, economical to the farmer, and will thresh more in a given length of time than any Machine in use. This Machine took the premium over some five or six machines at the Maryland State Fair, in October, 1852, by acclamation. We manufacture them from 2 horse-power up to 12 horse-power. We also manufacture Ploughs, Cultivators, Harrows, Grain Cradles, Wheat Drills, Corn and Cob Crushers, Corn Shellers, Straw Cutters of different kinds, among which are Smith's Virginia Patent, being cheap and simple in its construction, Revolving Horse Rakes, Premium Wheat Fans. We will also keep for sale Reapers, Mowing Machines, and all kinds of useful implements, such as are used by Farmers, Planters and Gardeners. We would call particular attention to the Wiley or Mott Premium Double Pointed Cap Plough, of composition metal. One of these Ploughs will last as long as three or four of any other kind now in use, and the metal will stand rocky or stumpy land as well as steel wrought shares—the shares only costing from 25 to 45 cents each—will plough from 20 to 30 acres each—the cap fitting right in the wear of the mould-board, the cap costing only from 25 to 45 cents. This Plough can be kept in order by the farmer or any of the hands, from five to six years. With this Plough the farmer is his own blacksmith. The Ploughs all warranted, and also warranted to put the ground in better order than any Plough now in use. Also Wrought Share Ploughs, both Right and Left; among which are the Improved M'Cormick's, with Cast Landside and Heels; Livingston County Plough, of all sizes; Subsoil Ploughs of the best patterns.

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THE undersigned is prepared to execute the analyses of Soils, Guano, Marls, Plaster, &c. &c. at the Laboratory of the Virginia Military Institute. Packages may be forwarded through Webb, Bacon & Co. Richmond, or Echols & Pryor, Lynchburg.

Persons desiring further information will please address

WILLIAM GILHAM,

Prof. Chem. and Agriculture, V. M. I.

Feb. 1, 1852.

Lexington, Va.

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TAYLOR'S PATENT HAMES.

PUBLIC attention is called to this valuable improvement in Hames, which is both simple and effective in design, from which numerous advantages result, both to the owner and driver of horses, being a saving of expense as well as time, as they can be fastened as readily in the dark as light, and can be done with gloves on. If a horse falls down or gets entangled in harness, by this improvement he can be instantly relieved. A boy, female or any one that is able to throw harness on a horse, can fasten the Hames very readily.

This improvement can be attached to hames now in use at small cost. These Hames were exhibited at the Maryland and Pennsylvania State Fairs and were universally approved of, and a premium was awarded them.

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FOR SALE.—A thoroughbred Bull of the Ayrshire and Durham breed, in fine health and vigor—color rich red, with slight white spots in the flank, characteristic of the Ayrshire breed. Said Bull is immediately descended on both sides from Imported Stock. For testimonials of stock, &c. enquire of the Editor.
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I AM willing to assist gentlemen in purchasing and selling farms, stock, and poultry of every description; to attend to receiving and properly forwarding animals; also, to procure suitable overseers and laboring men for farmers and planters: all of which will be attended to for a small commission. My position as Marshal of the Maryland State Agricultural Society gives me advantages of knowing many men, and most good stock, which with my general knowledge of land induces me to extend the agency to land, men and stock. I have some fine farms to sell in Talbot county, and several in Baltimore county: subject to my order a number of prize animals, saddle and other stallions, and a few fine mares; Durhams, Devons, Alderney, and Ayrshire; pure long woolled sheep from the best flock in the United States; Chester and Suffolk pigs; Shanghai and other new and large fowls; also, two fine Jacks. All letters post paid, will receive prompt attention.

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ALL the valuable stock of Cows, Swine and Horses, also Machines, Implements, Vehicles and Furniture of the Mount Airy Agricultural Institute, Germantown, Pennsylvania, will be sold on the premises on the 15th of March, inst. Gentlemen, at a distance, who cannot conveniently attend the sale, are informed that A. Clement, Esq. of Philadelphia, an excellent judge of stock of all kinds, will attend the sale and make purchases to order.
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1853.

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